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ABSTRACT

This report is a compilation of reports and abstracts relating to research and innovative instructional activities conducted at Santa Fe Junior College (Florida) during the 1970-71 academic year. It is the third of an annual series and serves to document what has been tried at the college to encourage others to re-examine and experiment, and to evaluate what is being done. Contributors include faculty, administrative staff members, students undertaking a class or organization research project, and graduate students from the University of Florida and the University of Georgia for whom Santa Fe served as a laboratory. The 50 studies cover a wide range and, for the purposes of this publication, have been grouped into the following: (1) instructional reports; (2) abstracts of faculty/staff dissertations completed during 1970-1971; (3) inter-institutional projects; (4) college research projects; and (5) college endorsed projects. (Author/AL)

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SANTA FE JUNIOR COLLEGE

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RESEARCH,
INNOVATION,
AND
EXPERIMENTATION

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Gainesville, Florida 32601

September 1971

UNIVERSITY OF CALIF.
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INTRODUCTORY STATEMENT

Research, Innovation, and Experimentation for 1970-1971 is a compilation of reports and abstracts, relating to research and innovative instructional activities conducted at Santa Fe Junior College during the past academic year. It is the third of an annual series and, hopefully it serves to document what has been tried at the College, to encourage others to re-examine and experiment, and to evaluate what is being done.

Contributors include faculty, administrative staff members, students undertaking a class or organization research project, and graduate students from the University of Florida and the University of Georgia for whom Santa Fe served as a laboratory. The studies cover a wide range and for the purposes of publication have been grouped:

A) Instructional Reports;

B) Abstracts of Faculty/Staff Dissertations Completed During 1970-1971;

C) Inter-institutional Projects;

D) College Research Projects; and

E) College Endorsed Projects.

This booklet was prepared by and is a service of the Office of Research.

Ann Bromley, Ph.D.
Director

TABLE OF CONTENTS

Page

INSTRUCTIONAL REPORTS 1

1. Recognition of Individualized Learning in Nursing Programs - Carol E. Bradshaw 3
2. A Practical Experience in Political Science-Richard G. Buckner, Jr. 5
3. A Behavioral Approach to Auto Mechanics - Ralph Carlysle 7
4. Achievement and Proficiency in Foreign Languages through Individual Learning - Manuel S. Couto 8
5. Math Lab West: An Experiment in Teaching Efficiency - Stan Frank 10
6. Mass Communication and General Education: Phase Two - Marilyn Fregly 14
7. New, Flexible Dental Auxiliary Programs - J. Richard Gilliland 16
8. Providing Occupational Flexibility through Core Curriculum Planning - J. Richard Gilliland 18
9. Biological Parks Program - Raymond E. Giron and John P. Sullins 20
10. Programmed Learning Packages in Basic Concepts Skills in the Physical Sciences - Mary M. Guy 22
11. Manpower Development Training Program and Student - Barbara D. Leiterman 25
12. Research of Student Progress in Reading - Barbara D. Leiterman 27
13. Counselor-Aide Program - Stanley Lynch and Robert W. North 29

14. Innovative Practices in Anthropology - Stuart McRae 31

15. Audio-Tutorial Instruction in Health Related Programs: Developments During the First Year of Operation, 1970-71 - Bernard Murphy 33

16. Developments in the Health Core Program Santa Fe Junior College: 1970-71 - Bernard Murphy and Mary F. Davis 37

17. Development of Innovative Devices for Teaching Radiologic Technology - Robert A. Short 41

18. Community Educational Service General Education Program - Gary Steele and Jim Birdsall 43

19. Leadership Course in Human Dignity - Melonese Wilson 45

20. Mid-Management Program - William G. Wright 47

ABSTRACTS OF FACULTY/STAFF DISSERTATIONS COMPLETED DURING 1970-1971 49

21. El Amor Medico Introduction, Edicion Y Notas Al Texto De La Edicion Principe De La Cuarta Parte De Las Comedias Del Maestro Tirso De Molina 1635 - Manuel S. Couto 51

22. Members of Boards of Trustees of Florida Junior Colleges: Their Personal Characteristics and Opinions about Institutional Role and Governace - John Richard Gilliland 53

23. The Implementation in a Junior College of a Biological Parks Training Program for Zoo Technicians Including a Plan for an Educational Zoological Park - Raymond Ernest Giron 55

24. Factors Influencing Stack Emissions from Citrus Feed Mill Operations - Herbert Arthur Ingley, III 57

25. Presidents' Perceptions of Institutional Research in Southeastern Junior Colleges - George Robert Moore 59

26. Conceptual Systems and Self-Exploration - Irene Frees Penry 62

INTER-INSTITUTIONAL PROJECTS 65

27. College Preference Report - Ann Bromley 67

28. Survey of Student Rights, Freedoms and Involvements - Ann Bromley 68

29. Exchange Experiences - John Dumbauld and Rodney Wessman 72

30. Survey of Post-Secondary Occupational Education - Florida Community Junior College Inter-institutional Research Council and Santa Fe Junior College 76

31. Project Focus - Santa Fe Junior College and American Association of Junior Colleges 78

COLLEGE RESEARCH PROJECTS 81

32. Study of Evening Students' Counseling Needs - Max L. Bassett 83

33. A Pilot Project to Investigate the Role of a Psychiatric Consultant at Santa Fe Junior College - Rubye Beal 84

34. Follow-up Study of Licensed Practical Nursing Graduates 1959-1969 - Martha Bell, Ruby Philpot, and Barbara Cross 85

35. Characteristics of Santa Fe Junior College Students for the Fall of 1970 and Some Comparisons with their University Counterparts - Ann Bromley 88

36. A Survey of Characteristics and Rewarding Experiences of Santa Fe Junior College's area Technical Vocational High School Students 1970-1971 - Albert L. Daniels 92

37. A Study of the Characteristics of Evening Students at Santa Fe Junior College - Jack Fuller 94

38. Survey of Records of Santa Fe Junior College Graduates 1966-1970 - Richard Hebert and Robert Myers 97

39. Difficulty Analysis of the Common Program's Textbooks - Mary Ann Linzmayer 99

40. Follow-Up Study of Santa Fe Junior College Graduates - (1968-1970) - Stephen S. Sledjeski 100

41. Student Evaluation for Faculty Development - Stephen Sledjeski and Ann Bromley 102

42. Follow-Up Study of High School Vocational Programs - Robert Sterling 104

COLLEGE ENDORSED PROJECTS 107

43. Mature Women at Santa Fe Junior College - Judy Ann Aanstad 109

44. A Model of Effectively Communicated Orientation Procedures in the Community College - Robert Gatton 111

45. A Conceptual Cost Accounting Model for a Community Junior College - Robert H. Hosken, Jr. 113

46. Selected Student Opinions about Transfer Problems - Caroline Noyes 115

47. Effects of Television News Item Position on Viewer Evaluation of News Item Importance - L. Joseph Sanders 119

48. A Comparative Analysis of Administrative Structure and Performance of Community Junior Colleges in the State of Florida - John Anthony Scigliano 120

49. A Comparison of Self-Concept, Self-Acceptance, Self-Ideal and Self-Ideal Congruence of University and Junior College Freshmen - Marcia Wehr 123

50. A Comparision of 16 PF Scores of Paraprofessional and Counselor Education Students for Personality Factors and Predictive Counselor Effectiveness - Marcia Wehr 125

INSTRUCTIONAL REPORTS

RECOGNITION OF INDIVIDUALIZED LEARNING IN NURSING PROGRAMS

Carol E. Bradshaw

Students with all types of health related backgrounds apply to the Santa Fe Junior College nursing programs. Discharged medics, orderlies, LPN's, nursing assistants, and foreign students; all want to become registered nurses in as short a time as possible and without having to take courses, the content of which they may already have mastered through work experiences.

This need to expedite the nursing programs became more apparent as the number of applicants with nonacademic backgrounds increased.

At first, exemption examinations for the nursing courses were administered individually; however, increasing demands soon made this approach impractical.

Now the Associate Degree Nursing Program offers exemption day. A day is chosen, preferably a faculty planning day, and all applicants for that particular course are informed to come in the morning and plan to remain several hours. Members of the nursing faculty set up the nursing laboratory so that several nursing skills can be tested concurrently. These skills vary depending upon which course is being exempted. Critical requirements serve as a checklist, and the instructor fills out a sheet for each skill as the student demonstrates the procedure on a model. The student moves from area to area until all skills have been checked. At the first exemption day it took two hours for seven faculty members to check eleven applicants through five different procedures.

Following the skill demonstration, students then take a written examination which covers factual material required in the course. Our generic students served as the norms for these tests. If the student is successful on all sections of the testing he may receive credit by examination for the entire course. If he is only successful in certain sections of the test he will be counseled to take the course but then be excused from those portions in which he has attained competency. For example, if he was successful in clinical skills but not in factual content he would be excused from clinical practice but be asked to attend those classes dealing with content.

As data are collected and analyzed in the future, we expect to develop some predictors which may serve to eliminate the necessity for such extensive testing. We have already discovered that a Licensed Practical Nurse usually has little difficulty with the basic nursing skills, whereas a medic with a narrow field of training can be in trouble in the borad range of nursing skills.

In addition to offering an opportunity to exempt courses, the Associate Degree Nursing and Licensed Practical Nursing curricula are being re-examined for content. At weekly meetings the respective faculties are identifying the concepts which must be taught to students in each program in order to insure the desired terminal behaviors. As these concepts are being developed they appear similar for both programs but vary largely in the degree of detail and ability of the student to interpret and act upon the data. From these concepts, behavioral objectives are emerging which can be measured and tested.

Also in the Licensed Practical Nursing Program during the past quarter, some interesting things are being tried by the faculty. To teach factual content, students are divided into small groups of eight to ten and assigned material in the health related programs' audio-tutorial laboratory and in specific textbooks at the beginning of each week. Toward the end of the week, the students meet with the instructor in discussion groups. Students interact and discuss the material assigned with the instructor and fellow students; there is no formal lecture. During this small group work students can discover what it is they do not understand and seek clarification while the instructor obtains feedback as to each student's progress, problems, and the effectiveness of her teaching. This process takes place weekly before the testing period. It is the first step in developing modular teaching units.

A PRACTICAL EXPERIENCE IN POLITICAL SCIENCE

Richard G. Buckner, Jr.

During the months of March and April of 1971, I was frequently approached by my political science students with questions and opinions concerning the current political situation in the United States. Their interests and our discussions ran the gamut from "how can I make myself important in the governance of our society?" to "I think we ought to tear it all down and start over again".

Detecting widespread interest in current political events, I attempted to reinforce it by announcing that a one credit hour independent study in political science would be offered to any student wishing to explore any aspect of the current political environment.

Immediate response was received in regards to the "May Day" demonstration planned for the first week of May in Washington, D.C. After discussing this topic of concern, several students decided they would like to undertake an independent study of demonstrations and protests as a method of political expression.

In order to allow these students to earn credit for their studies, we drew up an outline of what would be covered in the independent study. The plan of study would be in three phases:

1. Pre-study including readings on political expression and demonstration, and group discussions of the material studied.

2. Field experience consisting of a trip to the "May Day" demonstrations planned for Washington, D.C. on May 2-6, and on the spot, first-hand discussions with government officials, demonstrators, etc.

3. Post-study or follow-up through discussions of the political phenomena observed, and findings or evaluation of the effectiveness of this type of expression.

After reading assignments were discussed and the first phase complete, I accompanied three students to Washington, D.C. to carry out phase two of the study. While in Washington we tried to observe as many "May Day" activities as possible in order to give a broad base to our coverage of the event. In order to get a well rounded view of the phenomena, we also had several discussions with government leaders, police officials and demonstrators. Our goal was to sample, observe, and record as much of the goings-on as possible.

Upon our return from Washington we commenced with the third phase. Several discussion sessions were held where we related our individual experiences and interpreted them. This was followed by a summarizing session in which we tried to draw some conclusions about the political events studied. One unanimous conclusion reached was that this exposure to actual political events and first-hand experience, accompanied by independent study, has given the participants invaluable experience in a very important aspect of American political phenomena.

A BEHAVIORAL APPROACH TO AUTO MECHANICS

Ralph Carlysle

The 1970-1971 school term enabled me to evaluate my teaching methods, to examine the relationship between students and their instructor, and to apply some career experiences to student learning.

The instructor-student relationship is dependent upon their feelings toward each other. When they fail to communicate with each other only silent opinions are formed, and there can be no learning. I believe the instructor gains knowledge from the student, and he in turn is able to pass it on to others. This is the idea behind education.

Several years ago I was in charge of a dealership service department, and I experimented with human relations. Through observation and trial and error I was able to raise the efficiency of the mechanics from 63% to 92%. After a careful survey and study, I found that the mechanics workers are better and faster on particular jobs and that working on jobs they enjoyed raised their morale and increased their feeling of accomplishment and success. This same method is effective with students, and a student will often assist another, even on a job he does not like, because his friend has asked for aid. There are many resources in our students if we will only look for them.

As a result of examining the teacher-student relationship and of implementing career and background experiences to the teaching-learning situation, the dropout rate has been reduced considerably, and the enrollment in the auto mechanics program has steadily increased.

ACHIEVEMENT AND PROFICIENCY IN FOREIGN LANGUAGES THROUGH INDIVIDUAL LEARNING

Manuel S. Couto

During the past several years, different methods of teaching foreign languages have been used. Emphasis was given to writing and translating skills of the target language. Teaching techniques and testing methods were conceived to that purpose. More recently, educators felt the need to accommodate the teaching-learning process of foreign languages to the needs of students enabling them to speak the target language besides reading and writing it. Thus, emphasis was placed on the oral approach rather than on the written practice.

We believe that in order to enable a non-native to understand, speak, read and write a foreign language, and make such language practical to him, the oral approach is vitally needed, but the other elements of the language are also very valuable, like phonology, grammar, lexicology, semantics, history, and literature. We realize though that one of the biggest problems that a student of foreign languages faces is the need to practice the target language outside of classroom activities, thus making the above mechanics of the language meaningful to him. This is needed because in memorized classroom dialogues, basic sentences, and pattern drills, the language controls the speaker, but in communication the speaker controls the language.

During the Fall of 1970, we experimented at Santa Fe with the beginning Spanish classes utilizing an individualized instructional system. It was designed to help individual students to develop and increase achievement and proficiency in the Spanish language through the following:

1. Presentation of content in such a lively manner that it required and encouraged student interest in class activities and the practice of the language outside of class.

2. Teacher-student decisions regarding all class assignments with the instructor keeping in mind student needs, abilities, aspirations, and motivation.

3. Discovery of individual differences in knowledge level to identify low learners in order to give to each individual the appropriate di-

rection and help to accomplish the behavioral change expected by the course.

4. Stimulation of daily dialogues between instructor and students, and students with their peers, to increase the student's ability to speak the language. Advanced students were very effective in helping other classmates with the same material mastered by them previously.

5. Utilization of the Audio Visual Aids and the Language Lab to advance the oral practice of the language, making the student an active participant with those instruments, thus avoiding a passive attitude that in the past used to be developed by students in such circumstances.

With this program all students can learn any foreign language with achievement and proficiency in a short period of time.

MATH LAB WEST: AN EXPERIMENT IN TEACHING EFFICIENCY

Stan Frank

The spring term, 1971-1972, witnessed the development of the Mathematics Learning Laboratory on the West Campus of Santa Fe Junior College. The experiment was carried out by this writer with certain specific goals in mind.

The primary goal was to offer individualized remedial instruction to as many students as possible. In addition, it was desired to invoke certain principles which have recently come to the fore in educational circles. These principles are accountability, visibility and cost-benefits ratios.

Considerable statistical analysis will have to be carried out to properly assess the accomplishments of this attempt to make a breakthrough in instruction. However, certain basic data is now available and will be cited here.

First, the Math Lab reached a total of about 250 students during the spring term. Of this number, 183 were registered for general instruction or in special programs, coming to the Math Lab in small groups for two to five hours each week.

In addition to students coming to the Math Lab, the lab went out to meet the students. An example of this service to the college community was a series of sessions to boost the basic skills of a class of students studying business practices. Diagnostic testing of this group showed it to be extremely weak in mathematics. Subsequent tests after instruction showed increments of growth of six months to a year after only six sessions. There is sound reason for believing, however, that these students will lose their facility with figures if reinforcement is not given in the future.

The general growth of the students who attended the Math Lab on a regular basis has been impressive. Most of the students who come to the lab have received very little instruction in mathematics. They tend to score between the second and the fourth grade levels. Some students score near the zero mark which seems astounding, for it is impossible today to attend public school for twelve years without considerable exposure to the basic arithmetic operations. Nevertheless, these students often come with confidence in only one basic operation: the addition of positive whole numbers.

Visibility was gained in two ways. First, the student keeps a folder which contains a record of all of his work. He knows where he started, where he needs assistance, and what progress he has made in each area of weakness. His growth is measured quantitatively so that from class to class, and day to day, he can feel a sense of progress and build up a succession of successful experiences. Visibility is also obtained by oral lab diagnostics in which self-deception is impossible. This technique can only be used when the confidence of the student has been won. By always treating the student as a person and a friend, rapport can be achieved rapidly.

Regarding cost-benefit ratios, it has been relatively easy to keep track of the total investment in hours of instruction in the Math Lab during the spring term because only one person was employed and that person worked a forty-hour week. The cost of services was, therefore, the sum of a single salary plus the administrative and capital overhead. The room used was small, made for only twelve students, and no equipment or teaching aids were employed except those handmade by the instructor. No books were purchased, and perhaps one hundred dollars would cover the cost of photocopies and other office supplies.

An attempt was begun during the spring term to quantize all the mathematical subject matter taught from first to twelfth grade into discrete concepts, the partitioning being arbitrary. A combination of experience and systematic analysis of the material taught in our public schools revealed that about forty concepts are put forth each year, with an additional ten thrown in for the superior school. This adds up to a total of 480 to 600 concepts for twelve years of public school education.

Two classes of nursing students were independently tested during the term, and their respective CAL (Concept Achievement Levels) were 67.1 and 68.08 on the average. A half dozen other groups have been tested at Santa Fe, and none of them scored higher than the nursing groups. The diagnostics used assumed that everyone knows the first forty or fifty concepts so the grade level is determined by dividing the CAL by 40 and adding one year to the result. Clearly, these students came to us with extremely modest backgrounds in mathematics. Most of them did not possess test-taking skills and very few students could cope with word problems.

A careful record of student progress was maintained. The diagnostics were carefully designed to pinpoint areas of weakness, and each of these "critical" areas was given due attention in personalized instruction. This may be the reason for the dramatic growth of the students.

Although the final statistics will not be tabulated for another month, the analysis of student growth after the first seven weeks of school showed that the typical student averaged slightly more than one year of growth for each twenty periods of instruction. But averages are misleading, and the students differed widely in their response to the support provided in the Math Lab.

Many students who suffered family problems, ill health and other distracting influences, did not attend regularly, and their average was significantly lower than the group which kept to their schedule. Some students moved ahead six or seven years in less than six months. These were the leaders, of course, and they tended to be representative of all ages, sexes, and races. Three of the fastest growing students had initial CAL scores under 30. On the whole, however, the student who came to the lab best equipped tended to move ahead the fastest.

If one now divides forty concepts by twenty hours, one gets what sounds like a modest two concepts per hour of instruction. However, this adds up to one year of math at the end of twenty hours, and that is at least four times the growth rate of students in the public schools, assuming these public schools are succeeding. In the case of almost all of the students we have met, the public schools did not provide the knowledge, skills and working habits requisite for college level work in science and mathematics.

The total number of concepts communicated to the total number of students attending the Mathematics Lab during this term should be divided by the total dollars spent to accomplish the job. In this way, the benefits per dollar may be calculated. A computation done some months ago estimated that if a professional learning specialist were paid $12,000 per year, the cost per concept would have been forty cents.

A parallel computation showed that $1.50 would be required to accomplish the same result in the public schools, assuming this type of instruction was effective there. Literally pounds of data are available in the Math Lab for the interested reader. Suffice it to say here that efficiency is both possible and practical in both the math and science teaching areas, but visibility is a prime requisite for the success of any such program.

Accountability implies that the instructor is held accountable for student progress. No ifs or buts or excuses are permitted. If given half a chance, almost every student will respond to inspired instruction. The teacher should put it on the line: YOUR SUCCESS IS MY SUCCESS. If you don't do well, *I* get the failing grade! (It is planned to extend the accountability concept to the integrated science area during the coming year.)

MASS COMMUNICATION AND GENERAL EDUCATION: PHASE TWO

Marilyn Fregly

This study is the second phase of action research in planning and implementing an up-to-date curriculum in mass communications for junior college students.

Based on the first phase recommendations, the following steps have been taken:

1. A "hands on" workshop was provided in an introductory course to communications media. The course gave training in basic skills of planning and creating materials for print and broadcast media.

2. A workbook and teacher's manual are now in preparation. It will be entitled "Media on Media". In this way technical skills can be taught through a multi-sensory approach, and students can work independently in the creation and production of media so that class time can be better spent in the projection, discussion, and evaluation of each student's project.

3. Studies were conducted in three classes of another introductory course, Writing for the Mass Media. Several instruments were tested for validity: the Person Orientation Inventory by Shostrum, the University of Maryland Self Concept as a Learner Scale, and an Inventory Checklist of Personal Characteristics of Journalists. The data collected from the testing instruments were correlated with pre- and post-tests of readability using the Gunning Test for Understandability.

The results have led to a tri-level communications model:

1. The message centered level, long popular among media researchers as well as educators, deals primarily with cognitive information. In media research messages have been traced in feedback or diffusion models. The same is measured in education through the traditional multiple choice and essay exams.

2. The perception-centered level has been studied by media and psychological researchers. A number of research studies are now exploring the relationship of attitude to behavioral change. But as studies in

prejudice point out, behavioral change need not involve basic attitudes and belief systems. However, the encouter group technique in the classroom did reveal the amount of individual distortion and selectivity to media as to what was "felt" to be salient information. This was brought out in discussion using movie films on racial intermarriage, agrarian vs. urban life style, and a film fantasy on life and death.

3. The resistance centered level delves into an individual's self-imposed barriers to learning or change. Borrowed from psychoanalytic theory, "change" (conversion or persuasion) takes place when the individual can be shown that he is resistant, how he is being resistant, and what he is resistant against. This was applied on an individual basis with students expressing difficulty in setting for themselves an achievable goal and in following through to completion of the task.

NEW, FLEXIBLE DENTAL AUXILIARY PROGRAM

J. Richard Gilliland

In collaboration with the Alachua County Dental Society and the University of Florida College of Dentistry, Santa Fe has initiated a program to train dental auxiliaries. There are four other such auxiliary programs in Florida junior colleges; these programs offer a one-year non-credit vocational certificate.

In order to maximize career mobility, the Santa Fe program is set up to allow students to take courses either for credit or non-credit. Students who already have the Associate Degree will take the non-credit route. The majority of students, however, wish to take the program for credit. After one year in the program, these students have completed all the Associate Degree requirements except five of the Common Program courses. Students are then qualified to take the examination to become a Certified Dental Assistant. They may then go to work as a C.D.A. and pick up the additional Common Program courses at night to complete their A.A. requirements.

Receiving the A.A. Degree will help these students to move into other dental related occupations later on. In the future, a program to train dental hygienists will be developed in collaboration with the University of Florida College of Dentistry. Students who have graduated from the Santa Fe Dental Auxiliary Program will be able to receive advanced placement in this program whereas they would have to start at the beginning if they had gone the traditional non-credit route. Also, there will be additional programs such as a dental lab technician program that will emerge as the College of Dentistry grows. Accessibility into these programs will be maximized for our students who have taken the Santa Fe dental auxiliary program for credit.

Should these students choose later on to move laterally into another allied health occupation that is nondental related, they may do so with advanced placement since part of their original dental auxiliary course work is a health related core program taken by all Santa Fe health related students. Courses previously taken in the Common Program plus electives will also count toward the student's new occupational program requirements.

This program will begin in the Fall of 1971. A simulated dental office with operatories and reception area will be incorporated. Regular classroom/laboratory work will also be performed in this new dental complex.

PROVIDING OCCUPATIONAL FLEXIBILITY THROUGH CORE CURRICULUM PLANNING

J. Richard Gilliland

The need to develop curricula that provide students the opportunity to change occupational choices is becoming more pronounced. As the rate of social and technological change accelerates, concommitantly educational programs must become increasingly flexible in order to insure vertical, horizontal, and even geographic occupational mobility.

In health related programs we are realizing this flexibility by core approaches to instruction. The article titled, "Developments in the Health Core Program, 1970-71," by Bernard Murphy and Mary F. Davis, appearing elsewhere in this publication, outlines our efforts in pre-occupational education.

Beyond this educational level, called the "Health Related Core Program," we have initiated other levels of core instruction. The technical core includes basic support courses needed by students in a variety of health related programs. Human Anatomy and Physiology is taken by all students in the health related core program. Students needing additional instruction in this field take an additional technical core course. Associate Degree Nursing and Physician's Assistant students are in this category. Other technical core courses include technical math (MS 151), Physiological Chemistry (CY 120), and Microbiology (BY 240).

Thus, a student may, for example, go through our Radiologic Technology Program, go to work, then decide he would like to go into another field such as Cardiovascular Technology or Nuclear Medicine. He may enroll again at Santa Fe Junior College and begin his new instruction at an advanced level since the health related core program is required of all health related students. In addition, courses previously taken in the technical core area will apply toward his new occupational program requirements. This flexibility also applies to students who change occupational choices while still at Santa Fe Junior College. As a result of having already been involved in certain core programs, they may move horizontally into another program with little loss of credit or time.

Similarly, the core approach is being utilized so that students wishing to continue into baccalaureate programs may do so without having to take many additional courses before being accepted. Students in our Physician's Assistant Program, for example, will be able to go directly into their junior year in the College of Allied Health Professions at the University of Florida to receive a B.S. in Physician's Assisting without taking any additional courses beyond the Santa Fe Junior College Physician's Assistant Program. The core courses are set up so students will get basic courses which should be transferable to programs in other parts of the country in the event the student moves to another area. Vertical mobility is encouraged through the core approach and through exemption examinations discussed in this publication by Dr. Carol E. Bradshaw in the article, "Recognition of Individualized Learning in Nursing Programs."

Core curriculum planning is essential, regardless of the student's occupational area, if educational institutions are to meet student needs at a time of rapid social and technological change.

BIOLOGICAL PARKS PROGRAM

Raymond E. Giron and John P. Sullins

After the initial concept of the Biological Parks Program was formulated in late 1969, a Staff and Program Development grant for feasibility studies and research of the literature was applied for and received. The ensuing tours of zoological gardens on the west and east coasts supported the researchers' theories that this program would be the first of its kind in the history of zoo education, would provide a valuable, needed training base for our nation's animal keepers, and, with college and zoo support, would have a high expectancy of success.

Initial course offerings utilized the 199 nomenclature, that of an experimental offering. Following faculty, committee, and Board of Trustees approval in January of 1971, the Biological Parks Program became a Santa Fe recognized instructional program; courses were then catalogued under a "ZO" nomenclature. In conjunction with the passage of the program concept, name, and taxonomy, a training base was agreed upon by the originators and the College and Trustees. Ten acres in the northwest corner of Santa Fe's new campus site were set aside and staking and surveying by College teams was carried out. This site, Santa Fe's "mini zoo",will be a small pastoral zoo housing new world tropical and semi-tropical flora and fauna. Stress in this facility will be upon beauty and suitability of habitats, conservation of wildlife, breeding of animals, and wildlife education both for program personnel and the community at large.

The program faculty, students and interested volunteers from the community are working on a master plan for this new facility which should have initial occupancy by the summer term of the 1971-72 school year.

Until the new campus site is occupied, a temporary, small zoo is being constructed on one of Santa Fe's present campuses. An animal room and animal enclosure have been maintained since the fall term of 1970 utilizing student labor and minimal funds. In this small zoo, which has been licensed by the State of Florida and the Game and Fresh Water Fish Commission, there are currently maintained some seventy-five specimens - reptiles, amphibians, birds, and mammals. Beginning the fall term of 1971-72, this facility will be open to the public daily being staffed by program personnel.

Student response to the program has been rewarding. Current students, graduated students, and people from other areas and states have shown interest and have stated intent to enter the program. Some 50 continuing students are currently in the Program showing enthusiastic response. At the end of the summer term, 1971, four courses will have been offered including: Biological Parks Orientation and Conservation, Zoo Ecology and Terminology, Basic Keeper Training, and Zoo Practicum. During the coming year eight additional courses are planned which will enable students to fulfill program requirements in phase.

PROGRAMMED LEARNING PACKAGES IN BASIC CONCEPTS SKILLS IN THE PHYSICAL SCIENCES

Mary M. Guy

This project was conceived as a way to provide a source of individual instruction in some of the areas of physics (measurements, motion, force, etc.) which are included in the general physical science course listed as PS 111 in the College's catalogue. Most of the students choose to take the course because they feel it is required for graduation or for continued work in their major field of study. Some take it as a preferred alternative to a less appealing science. Very few have much confidence in using even a minimum of the concepts and techniques which are the basis of the usual investigations in physical interactions. Statements and text material resembling mathematics can cause frustrations and panic reactions in many of the students.

Although some texts include an appendix which reviews the few mathematical skills helpful in physical science, available texts do not include enough detail to make either the concepts or their mathematical manipulations clear to our students. As a result, from the instructor's viewpoint, it is difficult to present some of the ideas, and student frustrations are high. "Programmed" learning was considered as an answer to these problems. Programmed learning packages have the advantage of giving immediate feedback to correct errors and to bolster confidence by reinforcing right answers. Ideally they can be used by a student to cover a subject at his own pace. This project was an attempt to develop some of the necessary material for attaining the result in PS 111.

Two programmed packages on the subject of standard scientific notation (a technique especially useful with very small and very large numbers) were prepared. A programmed supplement explaining the manipulations used to add, subtract, multiply and divide positive and negative numbers was also made up for students who needed this remedial help. Several dozen short quizzes which require use of scientific notation and knowledge of the metric system were prepared and used with physical science classes. Three different instructors in physical science and physics courses distributed the packages for three semesters to their classes. The collected comment sheets (approximately 300 students used the packages) guided a major and thorough revision of each package. Because of student requests, additional exercises were prepared for the three packages. It is anticipated that six to seven hundred students will use the revised versions during the 1971-72 school year.

Students have repeatedly volunteered the effectiveness of the packages as they discussed other problems they had related to the course. These students had made a conscious commitment to finish the course. At present there is no way to assess the effectiveness of these presentations for students who dropped out of the course, but a larger percentage of the students are staying in the course, and fewer of these are not achieving competency. My experience with this method during 1970-71 indicated that most students respond more positively when the packages are included in actual classroom activity or as classroom related exercises than when they are simply asked to use the packages independently.

Excerpts from a published, programmed physics text on the topics of metric measurements, motion and force were presented to the students.

Materials were collected for approximately one hundred exercises elucidating topics in the study areas of mechanics, heat, electricity, magnetism, atomic structure, and radioactivity. Twenty to twenty-four class homework exercises were selected from this material. Each student's answers were graded individually, and students were encouraged to repeat unsatisfactory exercises. This activity encouraged student-teacher interaction on a personal level. In the future this material may be employed in a manner which will allow the student to choose a definite number of exercises to be completed. These exercises stimulated discussion and application of concepts discussed and demonstrated in lecture.

Lists of terminology (along with some selected equations) in the study areas of the course were compiled and given to the students as study aids. The equations were also made available during tests, and one class exercise was devoted to solving these equations for each term present.

A device using numbered wooden blocks was designed in an attempt to add visual and tactile reinforcement of the manipulations necessary to express measurements in standard scientific notation and to convert them from one metric unit to another. The device was used with several laboratory classes and from time to time in coaching individual students. It did not facilitate explanations with a large group of students in a classroom. It may prove useful for demonstrations in the latter situation.

Rough drafts of an extensive package on graphing and others on the concepts of distance, speed and acceleration were prepared and distributed to five or six of the College's science instructors for comment. Revisions based on their suggestions will be tested with all Physical Science III students during the summer term of the 1971-72 school year.

The most unexpected and perhaps the most appreciated by-product of this project has been personal. While coaching students individually and in groups over the topic of standard scientific notation, I have been able to improve my expository skills and experiment with techniques of intra-group teaching. In addition, analysis of concepts and their applications in detail for inclusion in the packages has helped me develop more lucid explanations in the classroom.

MANPOWER DEVELOPMENT TRAINING PROGRAM AND STUDENT

Barbara D. Leiterman

This project, based on my learning laboratory research of the Manpower Development Training Program and students at Santa Fe Junior College's North Center, involves a twofold problem--to understand the background and personality of the M.D.T.A. student and to find the best teaching method for this student. The 16PF Personality and Ability Test, together with personal data sheets, provided the data and information on my 40 students. My teaching method may be called modified audio-tutorial instruction.

The 16PF Personality and Ability Test (based on a sten of 1-10 with the mean being 20%) showed the M.D.T.A. student to be .9% more easy going, more of a concrete (image) thinker, more aggressive, threat-sensitive, self-reliant, shrewd, apprehensive, free-thinking, and follows his self-image more than the average high school student. He is the same as the average adult except that he is 5% more suspicious, average in shrewdness, and .9% more careless of protocol and more serious and relaxed. He is 5% emotionally less stable, more expedient, more serious, more imaginative and more relaxed than the average high school student.

The modified audio-tutorial approach I used is designed to accommodate the majority of M.D.T.A. students who are concrete thinkers. Traditional educational approaches have catered to abstract (word) thinkers, and have neglected the other "track" of thinking--concrete (image) thinking. Concrete thinkers, who are no less intelligent than abstract (image) thinkers (their intelligence is merely different), have been presented learning in a form basically incomprehensible to them. They have done remarkably well despite this disadvantage.

The audio-tutorial method of instruction is designed to alleviate this problem. The core of this approach is the student, not the instructor, and it employs various types of learning experiences and media. It includes three basic study sessions--the General Assembly Session (GAS), the Individual Study Session (ISS), and the Small Assembly Session (SAS). The emphasis is on independence and flexibility, not regimentation.

The modified audio-tutorial approach is similar to the audio-tutorial approach except that the GAS is excluded, quizzes are not used in the SAS, and behavioral objectives are implied, not explicit. These objectives, as in the audio-tutorial method, are to motivate the student to get involved in the learning process, to place the responsibility for learning upon him, to make his learning self-directed, and to allow him to progress at his own rate.

To do this the instructor must recognize that his own role has changed over the years from that of a major source of content to that of a manager of learning experiences. To place the emphasis on the learner and not the teacher, the instructor must abandon his traditional role as lecturer. He must develop skill in diagnosing learning problems, formulating meaningful and desirable behavioral objectives, prescribing the best learning sequences, using a wide variety of learning media, conducting small group discussions, and assisting students through individual conferences. I, and the other instructors at the North Center, have tried to follow this role of the instructor in our work with the M.D.T.A. students. Correspondingly, the environment for our work with the M.D.T.A. students has been tutorial; we conducted the learning experiences of each student as if we were tutoring a good friend. Our modified audio-tutorial approach has developed a program of meaningful experiences that are both individualized and flexible.

The modified audio-tutorial method of instruction, then, is the tool by which the instructor can help the concrete thinker to bridge the gap between words and images, a gap with which traditional methods of instruction have been repeatedly unable to cope. This method makes use of the background, traits, and personality of each of the M.D.T.A. students, giving the instructor the key by which he can help each individual to make the word-image associations that are appropriate for him and relevant to his own experience.

This process of bridging the word-image gap is the area in which the modified audio-tutorial approach must be even further refined in the future. Further investigation must be made in order that the concrete-minded student with an image-oriented mind can eventually make word-image associations with such proficiency that he can use the printed word without being forced, as in the past, to become an abstract thinker.

RESEARCH OF STUDENT PROGRESS IN READING

Barbara D. Leiterman

This research project had a fivefold purpose. First of all, I planned to observe if the students who attended the Learning Laboratory at Santa Fe Junior College's North Center made any significant gains in reading ability as compared to those who did not attend the Laboratory.

Second, I planned to find out what significant gains, if any, in reading ability were made by those who attended the Lab during 1970-71 and to compare them to those which were made in the Lab during 1969-70.

Third, I planned to find out what reading materials they enjoyed most, and what materials and equipment they felt were most helpful in improving their reading.

Fourth, I planned to compare by observation the answers to the third purpose with the results received last year.

My final purpose was to locate those students who made gains in reading ability, and see if there was any correlation between improvement and the material used. This information would also help in the evaluation and ordering of materials for next year.

Two groups were utilized to facilitate the purpose of this research project. The experimental group was composed of twenty students who attended the North Center Learning Lab regularly. These students were eleventh and twelth graders whose pre-test scores were similar to the twenty-four tenth, eleventh, and twelth graders of last year. The control group consisted of twenty students who either started the Learning Lab and had dropped out after several weeks or who had never attended. Their pre-test scores were similar to last year's twenty-four. I had exactly four blacks and sixteen whites in each group.

At the beginning of September, 1970, all students at the North Center were given the comprehension section of the Stanford Diagnostic Reading Test, form W, level II. In early February, 1971, the post-test was administered. It was the same form and level as the pre-test. In addition, the students in the experimental group were asked three questions: 1) What materials have you used? 2) Which materials did you like the most? 3) Which materials do you think helped improve your reading the most? The ten students in the experimental group who made the highest gains were selected and a tally of materials used most was taken by examining the work in each student's folder.

Upon completion of the testing, the computation, and the statistical analysis, it was found that the mean gain in grade level made by the experimental group was one year and three months and by the control group was one year and two months. The mean grade difference of the experimental and control groups on the pre-test was about 4.8 months and on the post-test 5 months. This shows that there was a slightly greater difference between the experimental and control groups on the post-test than on the pre-test. It was also found that the gains made by both groups were consistent for the two year period. Furthermore, in the experimental group 10 out of 20 students made a gain of eight months or more. Although these gains did not prove statistically significant, it can be noted that the students who attended the Learning Laboratory made much greater gains in reading level than those who did not attend.

The materials that the students enjoyed the most, as well as the materials they felt helped them improve the most were the SRA (Science Research Associates) Reading Laboratories, The Checkered Flag Series, and I-MED (Instructional Materials and Equipment Distribution). The material that was used the most was the SRA Reading Laboratories. These responses proved to be highly significant at .05 level. A strong correlation was found between gains in reading level and the type of material used the most (the SRA Reading Laboratories).

Lastly, while there is no significant difference in gains between the two groups over the two year period, an examination of the data showed that similar gains were made in both years.

The instructor wishes to express her thanks for the assistance offered by the Office of Research in the statistical analysis.

COUNSELOR-AIDE PROGRAM

Stanley Lynch and Robert W. North

The Counselor-Aide Program of Santa Fe Junior College consists of two parts: a generic three month core of Human Service Aide courses and more specialized six months of Counselor-Aide courses. This program was initiated jointly by the Student Affairs and Academic Affairs Divisions of Santa Fe Junior College and was partially supported with Staff and Program Development funds. In several ways, the programs were envisioned as a radical departure from traditional graduate and undergraduate human service training courses. These include its philosophical assumptions regarding the growth of human beings, its selection and evaluation processes, its goals for growth, and its experiential and academic training methods.

The Counselor-Aide Program is founded on certain beliefs about people and their capacity to help others. Some of these are:

1) The helper must possess generic and specific knowledge, skills and attitudes; however, the essential attitudes and beliefs of the helper are not task specific. How a helper addresses a helpee, the manner of delivering service is as important as what service is rendered.
2) The attitudes which are essential for a positive, facilitative human relationship are those which are universally regarded as being a measure and a manifestation of humanness.
3) All physically healthy people possess the attitudes which are essential for a healthy human relationship. Some people, more than others, have actualized there infinite capacity to respond to others in an attitude of respect and love.
4) The educational process of preparing people for the helping professions is one of setting free rather than training. It is one of providing conditions for self actualization rather than externally imposing goals and behavioral criteria which are not freely chosen.
5) A truly creative person will spontaneously seek the skills which are necessary for his task. If he does not possess the skills, he will be able to select or define his function in such a

way that he is maximally creative and responsive.

The program attempts to recruit both the typical and atypical community college student. Within the latter group of students are those individuals who do not have a high school degree, individuals who have never attempted college, and persons who have advanced degrees but who did not receive counselor training.

Planning and providing educational opportunities for such diverse students presents many difficulties.

The program is experimenting with a phenomenological attitude of understanding human growth and interaction. This approach to psychology and counseling emphasizes the felt-experience as preceived by the helper and helpee as opposed to the objective categorical understanding of the helping relationship.

Specific goals have been tentatively established. These include:

1) Providing a trusting environment in which the student may creatively explore his potentials for helping.
2) Reinforcing and refining the student's present human abilities to assist others.
3) Providing the individual with both objective material about various human service delivery systems, and subjective feedback as to his level of facilitative functioning in order that he is able to intelligently evaluate himself with respect to becoming involved in a human service area.

INNOVATIVE PRACTICES IN ANTHROPOLOGY

Stuart McRae

Two innovative practices were initiated in anthropology during the 1970-1971 school year. The purpose of the first project is twofold: to individualize instruction, and to humanize the learning process through increased interaction with the students.

Both purposes are to be accomplished through the use of media in the following stages:

1. The entire class assembles on Monday morning for a multi-image presentation followed by a lecture. The object of both is primarily motivation. This session contains the only lecture for the week, and the lecture seeks to stimulate interest rather than convey factual data.

2. On three afternoons, the students are free to attend the mini-lab. This mini-lab is equipped with audio-tutorial machines which convey factual data in the form of recorded case studies, discussions with leading anthropologists and instruction in anthropological principles and methods. The audio-tutorial system is controlled by each individual student via a foot pedal. The student may come at any time he wishes between the hours of 8:30 and 5:30 and listen to pre-recorded tapes. He may listen as long as he likes or as short as he likes, thereby setting the pace for his own learning. He may stop the tape or reverse it at will. This arrangement gives the student control over his learning process. The audio-tutorial session is supplimented by two reading lists, one required and one with suggested reading.

3. During the other two days the students meet in small groups of 8 - 10 for one hour in "The Pit". The instructor presents problems and asks questions which are to be answered in terms of general anthropological principles conveyed during the audio-tutorial session. In such a small group emphasizing interaction, the instructor is able to get solid feedback regarding each students' progress. This session also permits each student to become involved and relate his feelings regarding the subject matter. A weekly evaluation is made by the instructor for each student during this session.

4. Evaluation of the learning process is made following the first three stages which provide, respectively, motivation; acquisition of data; and inquiry, problem solving, and application of data. The first evaluation occurs weekly in the "Pit Session". The second evaluation is provided through standard written examinations. The third evaluation is provided through detailed problems recorded on tape which the students solve through application of anthropological methods and principles.

The project is only half complete. Audio-tutorial tapes have been made, audio-tutorial systems have been purchased and will be installed in late August. During Fall 1971, multi-image presentations will be developed, and a pilot project involving the use of audio-tutorial systems will be conducted. During the winter term of 1972 a pilot study will be conducted utilizing both audio-tutorial system and the multi-image presentation. These pilot studies will involve approximately 60 students. Full implementation of the project is anticipated for the spring of 1972.

A second innovative project was instituted during the spring term of 1971 and hopefully will become a semi-annual experience at Santa Fe. Twelve Santa Fe students spent spring vacation exploring Mayan archeological sites in the Yucatan, Mexico. The purpose of this project was to provide an experiential base for learning. All participants had completed courses in introductory anthropology and therefore, could appreciate and benefit from living in another culture, and exploration of archeological sites.

The results seem to manifest themselves in (1) a broadening of educational experiences, (2) an understanding and appreciation of other cultures and life styles, (3) gaining new prospectives of American culture, and (4) a renewed interest in learning in general and studing anthropology in particular.

It is hoped that a second expedition will take place during the Christmas holidays, and a number of Santa Fe Junior College faculty, as well as students, have expressed a desire to participate. It is my intention, barring complications, to conduct two overseas expeditions of this nature for each year, as a regular part of the Anthropological program at Santa Fe Junior College.

AUDIO-TUTORIAL INSTRUCTION IN HEALTH RELATED PROGRAMS: DEVELOPMENTS DURING THE FIRST YEAR OF OPERATION, 1970-71

Bernard Murphy

The notion of independent or student-centered, student-controlled instruction has been discussed in professional literature for some time now. Its values have been clearly established on a theoretical basis. Arranging environments where such instruction can occur, however, remains a problem.

The health related programs faculty of Santa Fe Junior College committed themselves to the creation of a facility in which audio-tutorial instruction and, therefore, student-centered learning could take place. This decision was made in the Spring of 1970. A suite of three small rooms in the West House was set aside for an Audio-Tutorial Laboratory shortly afterwards. Basic renovation of the area got underway during the summer of that year.

Study carrels were placed around three sides of the largest room, audio-visual equipment and software pertaining to nursing measures were purchased, book shelves were set up, and tables were obtained for the center area of the main room. The software was made up of 8 mm film loops, Trainex filmstrips and sound records, transparencies, cartridge sound tapes, filmstrips, nursing journals and pamphlets, and programmed instruction.

The Audio-Tutorial Laboratory for Health Related Programs opened in late September, 1970 with the basic materials listed above.

It takes some living with a facility before its potential uses can be seen. This notion became a guiding principle in the development of the A.T. Lab. Therefore, while in most ways the area was incomplete in form, we, as a staff, felt confident that we would discover the form we sought through a trying-out process. One fact was clear, however, we had rather limited space to work with; we had to make optimum use of what we had.

There were two problem areas which needed immediate attention: (1) providing the lab with appropriate furniture, drapes, lighting facilities, carpeting, storage facilities, typing tables, display areas, etc.; (2) expanding our basic audio-visual and printed materials.

The problems were attacked simultaneously. We needed a basic set of guidelines for future purchases; we hit upon a rather simple one, viz. - that audio-visual equipment which students use most frequently would be purchased in quantity. The guide, then, is student-use. We would act like store managers; those goods most in demand by our clients would become our stock-in-trade. Similarly, we would obtain materials and equipment which the staff found useful for classroom and personal growth.

Trainex programs were in great demand but we had only two pieces of equipment which could play them. Our initial inventory included eight cartridge tape players and eight "study-mate" filmstrip projectors, however, so we transcribed the trainex sound records onto cartridge tapes; this enabled us to offer more students the use of the trainex programs as they used a combination of cartridge tape player and filmstrip projector to play the trainex programs.

A similar adaptation was made with 8mm film loops. It was found that when sound tapes made from scripts supplied by the company accompanied the film loops, the loops value to the student was greatly increased. From a beginning set of four tapes we created a set of over 100 film loops and accompanying tapes. Nursing instructors, since they had the technical expertise, narrated the tapes.

Filmstrips are deplorably short-lived in constant use. Converting filmstrips to slides and placing the slides in carousel projectors enabled us to both lengthen the life of the visuals on the filmstrips and, at the same time, make use of the eight carousels we had purchased. Still another benefit was gained through the process; we found instructors could use parts of the filmstrips in a mix-and-match fashion and create their own programs.

Instructors' classroom lectures were taped both in classrooms and in their offices when economy was desirable. Students could now play back lectures in student-controlled situations. Students realized they could replay those parts of lectures they either had missed or failed to grasp in classes. Student listeners were now in the same related position viz-a-viz orally transmitted data, as they are when they are reading printed data, i.e., they are able to regulate the rate of data flow and go back over sections of lectures requiring greater attention. As a consequence students improved both listening and note-taking skills.

The A.T. Lab is also a study-center. It contains two principal forms of assistance in studying: (1) health related materials; (2) other students. When the lab opened, lighting conditions were poor, and acoustics were equally bad. Both problems were overcome by being resourceful. We were able to get library-type study tables on which we placed study lamps. We carpeted all three rooms with an assortment of carpet fragments. Charitably speaking, the rugs are functional and colorful. The students like our creation; they seem to enjoy studying here.

The A.T. Lab windows presented two problems: a ragged appearance and poor outside light control. We planned to purchase drapes but the cost of custom drapes was more than our budget could take. When we found the material we desired, the nursing staff again showed its versatility by sewing the material. Now we have good-looking windows, and outside-light control.

We needed storage and display cabinets. A review of equipment catalogs told us two things--what we needed did not exist; what did exist was too expensive. We made preliminary sketches of the kinds of cabinets which would serve our purposes, presented the sketches to the College's cabinet shop, and got what we needed. Cost was low, the products are good-looking and highly functional.

We took a look at a device called the 3-M Sound-Slide System. When what you want has not been produced commercially, this system suggests: make your own programs. We did. But technical know-how is required. The College A-V staff had the expertise. We had the nursing knowledge and skill. The groups collaborated and made us the proud possessors of two Santa Fe produced Sound-Slide Programs: "Observation in Nursing," and "Perineal Care." More will be forthcoming.

Let's put it all together at this point. A student opens the door to the lab and is asked to sign in. He usually asks for material and/or equipment. The lab's receptionist-clerk aids him in setting up his own learning-station. This is what the carrels have become. The form and content of the learning-station is based upon what the student needs to view, listen to, or study; or combinations of the three. At any given time there can be several different types of learning stations. For example, as some students view an 8 mm film loop and listen to its associated tape, others may be developing nursing skills by practicing with a patient-doll. Still other students will be found reading nursing journal or working with programmed instruction. Charts and models are on display as further resources.

Such flexibility of space arrangements permits the A.T. Lab to act as a multi-media instruction center. Learning and instruction are controlled by the student himself. One can also see that as a learning resources center the lab is multi-dimensional.

Over the year, the A.T. Lab has become the "HUB" of health related programs activity. Instructors post clinic area assignments here as well as the outside-of-class learning to be done in the lab; there is reserved bulletin board space for student-nurse organizations. General notice and articles pertaining to the field of health occupations are also displayed. This group of activities, then, makes the lab an information center.

The lounge-office has many functions, viz. - it is an office for the lab coordinator. It is a professional library. That library contains professional nursing, dental, and education journals, books of interest on innovative practices in both health and education in general, and magazines. It is an area for staff meetings and conferences. It is used in tutoring students who need extra help. It is a place to relax - comfortable upholstered chairs and a large couch invite this action.

What is an audio-tutorial lab? Whatever a group of people make of it. We in the Health Related Programs are pleased with our creation. We built it from scratch. It is far from finished. Probably we shall be very unhappy if we reach the point where we are completely satisfied.

Should others adopt our design? "Adapt" would be a better term for form follows function. What do you need? That's where one begins! What will follow will be a product of your staff's imagination, creativeness, cooperativeness, initiative, and sweat. The design should be organic and dynamic. Never be afraid or unwilling to tear down, put up, rearrange, switch, or alter, for as your purposes, goals, and needs change your working space should reflect those changes.

DEVELOPMENTS IN THE HEALTH CORE PROGRAM
SANTA FE JUNIOR COLLEGE: 1970-71

Bernard Murphy and Mary F. Davis

During the summer of 1970 an experimental Health Core Program was offered for students planning to enter the LPN and ADN nursing programs in the Fall. The core, as an entry or orientation experience, was given three primary tasks: (1) help students become acquainted with the field of health occupations; (2) assist students in becoming academically and emotionally ready to enter the regular programs; (3) enable the core staff to examine each student's readiness for the regular program activities.

The initial core had only six weeks, or half a term, to accomplish the assigned tasks. The staff found that this was far too brief a period for students to achieve adequate readiness or for the staff to become sufficiently knowledgeable about students and their individual characteristics. We really did not have enough data about each student to make accurate judgments relative to actual readiness for further work in the nursing programs. In addition, the staffs of learning laboratories were seriously handicapped in their attempts to identify learning difficulties and subsequent to diagnoses offer remedial or developmental instruction.

Consequently, the staff agreed that the next core would be doubled in length to a full term, or twelve weeks. In Core II with the additional time, the staff was able to improve the collection and interpretation of data about the students, but the latter group still did not have enough opportunity to remedy learning problems or develop learning skills when the deficiencies were serious. For those students found unready for regular programs a workshop was created. The assumption made by the staff was that given a longer time and less pressure, learning handicaps could be overcome. This assumption proved to be true but only for a few students. The workshop, therefore, is a good idea which requires careful and effective implementation.

Now let us take a look at the actual course make-up of the core. BE 100, The Individual In A Changing Environment, provides students with opportunities to share with others in the core, both fellow students and staff, personal feelings about what they are experiencing. The emphasis is placed on the affective or emotional aspects of learning. BE also permits staff to get feedback from students regarding the effect instruction is having upon them as persons. There are many other gains through the encounter-type groups which typify BE classes: (1) students come to see that they are more alike than different from each other; (2) students can release frustration and anxiety in a supportive climate; (3) classroom instruction is often improved when students discover that the staff is vitally concerned with knowing which modes of instruction are most effective in facilitating the learning process in a given subject area.

HF 101, Introduction to Health Related Fields, has changed each time it has been offered. Originally HF was designed to orient students with Health Related Occupations and to permit students to switch programs if they felt they were better suited to occupations about which they knew little before enrolling in the core. When students displayed almost no desire to change their original plans, the course began to emphasize the idea of having students see how health teams function as units.

Learning and math laboratories (EH 111, MS 111) provide diagnostic, remedial, and developmental services. They are also highly supportive for students with attitudinal problems in the areas of language and math knowledges and skills. Most of the work in these labs is done on an individual basis or in small groups. Both labs have created diagnostic procedures to locate and pinpoint learning difficulties and tailor instruction to fit individual learning styles and problems. These labs also contribute the vital data the core staff has to have about student progress and readiness. Students are now looked at as they (1) enter core; (2) reach mid-term; and (3) complete the term.

BY 251, Anatomy and Physiology, has been a focal point of core. Academically, it is the most rigorous and demanding. Students are found to spend most of their time, energy, and worry over BY. Since it has been so much concern to students, several attempts have been made to rearrange both its form and content. In order to fashion a viable methodology and content, the staff has formulated such questions as these: (1) What in specific terms does a person need to understand about the structure and function of the human body in order to function as a professional health worker? (2) How can instruction be arranged so that each student's learning style, background, and rate of learning will be accommodated? (3) How can we use the Health Related Programs Audio-Tutorial Laboratory more effectively so that outside-of-class study will reinforce classroom and laboratory activities?

Finally, let us review some of the orientation and appraisal techniques developed through the year. Initially, students are placed in a somewhat unstructured situation for their first two weeks of the core. That is, for all their work, save Anatomy and Physiology, which begins at a rapid pace and accelerates when students' learning needs and personal problems have been defined in rough fashion, work begins in the learning and math labs; groups are organized for BE sections; HF gets underway with orientation procedures. The staff's goal at this point is to get everyone associated with core to see each other as persons. We are also trying to create personal-support structures.

We then introduce students to the techniques and process of self-evaluation. Of course, we assume that the more comfortable and secure students feel, the better they will be at looking at themselves honestly. Feeling comfortable and secure also facilitates the capacity to seek help. Since students must play the key role in making needs known, we try to assure them that they can in fact get help if they ask for it.

At the mid-point of the spring term we discovered, as we anticipated, that many students needed extra instruction in BY 251. A husband-wife team of Associate Degree Nursing students were recruited for tutoring those who sought the help. The tutors performed beyond expectations. We were able to fulfill our pledge of aid. But, as the tutors pointed out as the term closed, mid-point is really too late to give the amount of outside help required by the weaker students. We are going to act on the suggestion in the upcoming fall term.

At the close of each term, staff and students conduct their final evaluations. Decisions must be made regarding readiness. We try to be as supportive as possible, but this is difficult when students have set minds and hearts in particular directions. For those who gain acceptance, final interviews are pleasant and cordial. For those who do not gain entry to a program, there is much disappointment. The staff members who compose the interview teams attempt to help students with alternatives to the original goals.

In summary, the Core is designed to help people look at themselves and at an occupational area, in this case Health Related Occupations, and determine if they are ready and fitted to a training program for that area. The Core has been able to effect a significant decrease in student attrition. There are many problems we have uncovered and have yet to solve. We feel confident that we will deal successfully with these problems with the use of the structure and techniques we have developed through this year.

DEVELOPMENT OF INNOVATIVE DEVICES FOR TEACHING RADIOLOGIC TECHNOLOGY

Robert A. Short

The challenge resulting from the absence of commercially available radiologic technology instructional aids has in part been met by the development of several innovative materials complimentary to learning. These materials include such aids as an operable x-ray circuitry board, a semi-operable cutaway of an x-ray tube and housing, an energized x-ray teaching unit and shielding cabinet, and a display case for radiologic devices. Modifications in design were made to permit dual usage of all materials. When not employed for their primary purpose of classroom demonstration, they can either be used for laboratory instruction or displayed for reference purposes.

A unique x-ray circuitry board was designed and fabricated to aid the student in understanding the electrical aspects of x-ray equipment.

The model includes an electrical schematic, is operable, and simulates the effects of adjusting the controls of a simple x-ray unit. It includes voltage and amperage regulations, transformers, rectifiers, and the various meters normally used to reflect adjustments of the controls. An oscilloscope and other devices can be connected to numerous sockets in the circuit to reflect voltages, resistances, cycles, and various phases of rectification.

In addition to the unit being valuable for demonstration purposes, it can be used as a simulated gaming model in a laboratory setting for students to manipulate and measure the effects of various factors which parallel the operation of x-ray equipment.

The advantages of this operable unit over a sterile schematic are that it not only stimulates student interest but enables them to better and more readily understand x-ray circuitry, the purpose and principles of operation of the components, and to apply their knowledge to the clinical environment.

The x-ray teaching machine is unique in the sense that the cabinet contains a moveable inner platform which can be adjusted externally and contains a lead glass window for viewing the interior.

It may be used for demonstration purposes and laboratory experiments to show the relationships of distances, exposure settings, and secondary radiation to exposure rates. In a fashion otherwise unobtainable, the window vividly permits visualization of the effects of the prime exposure factors through the use of fluorescent materials.

Various accessory devices and components are displayed with the partially energized x-ray tube which also graphically depicts the tube housing and components. Many of the items are cutaways and labeled in detail such as beam restricting devices, x-ray and rectifier tubes of various vintages, film holders, and other pertinent materials.

Currently additional innovative devices are being designed and constructed in order to provide further opportunities for x-ray students to gain greater insights into the sophisticated science of radiologic technology.

COMMUNITY EDUCATIONAL SERVICE
GENERAL EDUCATION PROGRAM

Gary Steele and Jim Birdsall

Thanks to a new program instituted last January in Santa Fe's division of Community Educational Services, a number of Santa Fe students have a second chance at qualifying themselves for L P N and A D N training. These individuals who had not graduated from high school were motivated and interested in nursing training but were unable to score 10.9 (end of tenth grade) levels on the California Achievement Test, required of L P N trainees.

Through the cooperative efforts of the Dean for Community Educational Services, the Coordinator of Communications Laboratories, and the Vocational Rehabilitation counselors who sponsored most of the students, a block of four courses was designed which would help such students achieve the levels necessary for them to qualify for training. The courses were in the subject areas of English, social studies, general mathematics, and general science.

After more than two quarters, some of the results have been very gratifying for the students as well as for the instructors. One student dropped out of the eighth grade several years ago. Tested in January she was far below a 10.9 in all three C.A.T. skill areas. By June, however, she passed four of five sections of the State High School Equivalency test. She will retake the fifth section this summer, probably pass it, receive her high school equivalency diploma, and apply for A.D.N. training. In six months she has achieved approximately eight semesters of high school work.

Another student also failed to finish grade school. In January he printed poorly, read seventy words per minute with 20-40% comprehension, and was deficient in most basic math skills. He now reads over four hundred words per minute with 80-90% comprehension and writes well. In June he passed the math and social science sections of the equivalency test and failed the other three by only a few points. When he retakes the test this Fall, he has a good chance of passing all five sections. Upon receiving his equivalency diploma, he plans to enter Santa Fe and change from a dropout to a college student.

Other students in the program have been as successful as the two described above, and others have not. If we take into account, however, the problems so often found in the life of an adult whose background denied him a high school education, the results of the program have been very satisfactory. The motivation of the students and the individual attention they received in a small class helped compensate for some of the difficulties. Certain students take a while to adjust to the academic setting. Others are frequently absent for a variety of legitimate excuses: sick children, family crises, car trouble, hospitalization, etc. The value of this program is that it is flexible enough to accommodate such students and keep them progressing as quickly as possible toward their goals.

Because of the variety of skill levels among the students, instruction is often done on an individual basis or with groups of two or three. In most cases programmed or semi-programmed instructional materials are used. Recently, Vocational Rehabilitation counselors have requested more feed-back on the students they sponsor, and we have started sending bi-weekly reports to them.

The success of the program so far has proven to us that, given the right conditions, almost anyone can learn. A well-motivated student who can persevere has won half the battle. In addition, a student must have relative financial security. We had the unfortunate experience of losing two fine students who simply had to drop out to accept employment which conflicted with the hours of the courses. In most cases Vocational Rehabilitation or other agencies can take care of this problem.

LEADERSHIP COURSE IN HUMAN DIGNITY

Melonese Wilson

The class in Leadership came into being after the Community Education Coordinator had talked with people in many areas of the district served by Santa Fe Junior College, trying to find out some of the the things people in various communities were interested in having the College help them accomplish. These were the predominantly disadvantaged people. Of the many needs stated, the leadership training need was one of the most often repeated and one we knew Santa Fe could give immediate attention to supplying. Basic leadership tips were being sought by persons who had been elected by their community groups to represent them in many organizations, both local and at county level. Many of the persons elected had never held a position in which they had to make a motion, second one, vote or abstain from a vote, whichever the case might be.

After being told that Santa Fe Community Educational Service offered courses in many areas, the need, so far as they were concerned, was in basic leadership training, an understanding of Roberts Rules of Order, and a translation of those rules.

The first leadership class was held at a community center which was a centrally located place for all of the students that had shown enough interest in the course to pre-register. Seven students attended every class session; eleven of those sessions were held during that term. The students seemed to gain enough from the course that we felt it would be worthwhile to hold it again the following term.

Twelve students enrolled in the second offering of the course, and almost all were professional people. There were two black males, three white males, three black females and four white females. One student was a real estate salesman, one a warehouse manager and his assistant, and two were full-time University of Florida students, one in the law school and one in the architectural school. One student was a supervisor, one a secretary, and two students were housewives.

The class period is spent seeking out and solving specific problems; if the problem should arise during that day or after our previous class meeting, then we are capable of coming up with suitable action.

We have had speakers attend the class both to make known the various kinds of speakers they would be hearing and to familiarize them with some of the contacts they would make in their role as leader. The mayor of Gainesville spoke to our class along with other political and business leaders from the community. In addition, we have attended meetings at the University of Florida, held by the Women's Lib organization. We do not just sit in the classroom and read from a book, but use examples to point up the kinds and types of leadership needed for a specific area.

We point out all the things that work well in grooming one for leadership, such as public speaking skills, good grooming, and a pleasant personality. Most of these can be acquired, and the fact is pointed out to the student that Santa Fe offers courses which can help them to acquire these things.

As a result, one of our students is leading her professional organization in providing fees for ten students to attend non-credit courses as well as funds for one disadvantaged student to attend credit courses in order to attain an AA degree. The organization, under the leadership of this student, has also agreed to provide clothing for the full-time credit student. Another student, who is a nutritionist by profession, is going to go out into the community upon request from groups to lecture on proper nutrition and health care.

Our aim is to provide a mechanism by which persons can be motivated to explore avenues in the future to better their working and living conditions. We try to lead the student to an understanding that all of our lives can be as dignified as any person who we might encounter and that it is the cornerstone of all our efforts to improve living conditions for ourselves as well as others.

MID-MANAGEMENT PROGRAM

William G. Wright

Mid-Management is a two-year program of cooperative education between Santa Fe Junior College and local industry leading to the associate of arts degree.

The program combines classroom instruction with on-the-job paid work experience to provide the student with experience in the area of his occupational interest. It is a learning situation in which practical application goes hand in hand with classroom theory.

Since we registered our first eight students in the fall of 1968-69, twenty-eight students have enrolled in cooperative education, eighteen are still enrolled in the program, and two have graduated. Of the ten students who are no longer attending, three have experienced better job opportunities while still enrolled in the program, and two have gone on to four-year institutions. We have not been able to obtain any information on the remaining three students.

There are currently twelve active sponsors engaged in the cooperative endeavor with Santa Fe Junior College, and we hope the number of sponsors will increase with the new fall enrollment. With the exception of the very large retail establishments, we have been careful not to solicit sponsors engaged in high school distributive education programs unless they request affiliation and are willing to consider not abandoning their current high school sponsorship. We anticipate eighteen active sponsors by the fall of 1971.

Since the program is administered in accordance with Santa Fe philosophy, there is no pressure upon the student to meet a specific completion date. The program can be completed in eight quarters; however, the student is encouraged to make himself as available as possible to his employer not to exceed thirty hours. We have been forced to make exceptions where the student is responsible for or currently managing a store or department.

Fourteen of our students are men, only four of which are black and the program enjoys the presence of four ladies.

One of our first graduates came to the program from vocational rehabilitation, with a history of unemployability. Under good sponsorship and with much understanding, she completed the program and found no difficulty in securing employment in another state after recently being married. One of our black students who was cooperatively sponsored by a grocery chain now enjoys the position of manager of a retail grocery store with another chain. Three students came to the program as managers while still another was promoted to such a position while still enrolled in the program.

We have established a maximum limit of thirty students per coordinator. We hope the fall enrollment will bring the total number of students enrolled to a figure approximating that number.

ABSTRACTS OF FACULTY/STAFF DISSERTATIONS COMPLETED DURING 1970-1971

EL AMOR MÉDICO

INTRODUCTION, EDICION Y NOTAS AL TEXTO DE LA EDICION PRINCIPE DE LA CUARTA PARTE DE LAS COMEDIAS DEL MAESTRO TIRSO DE MOLINA

1635

Manuel S. Couto

This dissertation presents a study and critical edition of El amor médico, by Tirso de Molina, whose protagonist is a champion of "women's rights." Although it has gone through several editions, it has received little critical attention. Following a short biography of the author, which includes the latest information known about him, there is a complete chronological listing of all known editions of El amor médico, and an analysis of all the characters, with emphasis on doña Jeronima, the spirited protagonist who succeeds in being different from her contemporaries in a number of ways, but most particularly by becoming a medical doctor and by marrying the man she loves rather than the man chosen for her by her brother.

Tirso de Molina, in twenty-four of his plays, portrays spirited female characters who try to free themselves from restrictive social traditions and rules which seemed to assign women numerous duties but few "rights." These women champion their rights to choose a husband, to get an education, to travel, etc.

An analytical study of El amor médico reveals Tirso's attitudes toward women, love, marriage, social virtues and vices, and the plethora of mounteback doctors who swarmed in his day. The study also reveals Tirso's extensive knowledge of the classics, his sense of humor, and his admiration for Portugal and the Portuguese. A special section is devoted to the sayings, dicta, and proverbs which Tirso, following a practice commonplace in his day, sprinkled throughout the play. A summary of the plot is offered, together with a listing of the author's oversights in plot development.

The text of the play is based on the 1635 edition of Lucas de Avila, Tirso's alleged nephew. There is no known holograph. The spelling has been modernized except where the rhyme might be distorted by modernization. All the numerous Portuguese and Latin phrases are translated into Spanish, and all passages no longer clear to today's reader are clarified in the notes.

The degree of Doctor of Philosophy in Linguistics was awarded to Dr. Couto by the University of Florida. Majoring in Romance Languages and Literature, his chairman was Dr. Francis C. Hayes. Dr. Couto is a language instructor at Santa Fe Junior College.

MEMBERS OF BOARDS OF TRUSTEES OF FLORIDA JUNIOR COLLEGES: THEIR PERSONAL CHARACTERISTICS AND OPINIONS ABOUT INSTITUTIONAL ROLE AND GOVERNACE

John Richard Gilliland

The purpose of this study was to identify and examine selected characteristics and opinions of trustees of Florida junior colleges for the academic year 1968-69. Characteristics studied included demographic information such as sex, age, marital status, occupation, and income and personal information such as religious preference, political affiliation, and extent of formal education. Opinions studied included beliefs about role and philosophy, admissions decisions, curriculum, instructional staff, and governance of junior colleges.

Data were gathered for the investigation from the Division of Community Junior Colleges of the Florida State Department of Education, from a questionnaire mailed to all of the 185 trustees of Florida junior colleges, and from 22 interviews of selected Florida junior college trustees. Data received from the Division of Community Junior Colleges of the Florida State Department of Education and from the questionnaire were reduced by digital computer. Frequency and percent distributions were developed for the total group of Florida junior college trustees and for trustees serving rural, rural-urban, and urban junior colleges.

In addition to these presentations, analyses were made by certain selected subsets such as age of trustees, level of education of trustees, length of service on the board, and chairmen and non-chairmen of boards of trustees. Since the purpose of the twenty-two interviews was to further substantiate information that had been given on questionnaires, the interview data were not quantified but were treated by narration.

Based on the findings emerging from the investigation five major conclusions were warranted:

1. In regard to characteristics of the trustees, they were not representative of the total population of Florida. Lack of representativeness was particularly noticeable in regard to sex, race, occupational categories, and different levels of education.
2. Trustees were active participants in community affairs. Trustees held membership in a wide variety of organizations including civic and service, patriotic and armed services, professional business and occupational, social, and avocational organizations.

3. Trustees were normally well educated and widley read; over 70 percent had completed at least a baccalaureate degree.
4. There was little noticeable difference of opinions among trustees regardless of their demographic characteristics. More specifically, the trustees exhibited consistency of opinions concerning such issues as campus disorders, quality of instruction at junior colleges, criteria for admission of junior college students, and the role of junior college presidents.
5. A generalized profile of trustee opinions emerged from an examination of the data. Five characterizations were justified:
    a. Trustees strongly opposed campus disorders that were occuring at the time of the study.
    b. Trustees considered junior colleges to be institutions with a significantly different philosophical orientation from other institutions of higher education.
    c. Moderate involvement of junior colleges in bringing about social change was seen as desirable by the trustees.
    d. It was strongly believed by trustees that, although junior college education should be available to anyone who is able to benefit from it, students should appreciate their attendance as a privilege.
    e. Students and faculty, according to the trustees, should have but a limited voice in the operation and control of junior colleges. The junior college president was seen as being the powerful educational leader.

Dr. Gilliland completed his dissertation in 1969 at the University of Florida in the College of Education's Department of Administration under the sponsorship of Dr. Michael Y. Nunnery. Currently, he is the Director of Health-Related Programs at Santa Fe Junior College.

THE IMPLEMENTATION IN A JUNIOR COLLEGE OF A BIOLOGICAL PARKS TRAINING PROGRAM FOR ZOO TECHNICIANS INCLUDING A PLAN FOR AN EDUCATIONAL ZOOLOGICAL PARK

Raymond Ernest Giron

As environmental resources are exhausted, as the human population rises, and as wildlife is depleted, a new awareness of ecological and ethological demands and principles is necessary in order for life to continue on Earth. The responsibility for instilling this eco-cognizance resides not only with traditionally accepted educational institutions, governments and news media, but also with such institutions as our living laboratories - our botanical and zoological gardens. Zoos have the unique opportunity to educate large numbers for today's world by utilizing hundreds or thousands of living examples. Unfortunately the educational progress of zoos has been slow and offerings are now some forty years behind those of secondary school education. There needs to be and has been an increased professionalism in the zoo world, but some positions such as that of keeper remain educationally little changed. Through the elevation of zoo positions and the caliber of those staffing these positions an overall improvement in the quality of offerings is possible.

Educational institutions can be of service to zoological gardens by helping improve offerings, sharing techniques and by training staff members, not only at curatorial levels, but at the keeper level as well.

This dissertation purposes to explore and describe the changing role of zoological gardens in biology education, to show how educational obligations may be met, and to examine the role of zoo keeper. A description of the initiation, researching, and implementation in a junior college of a biological park training program for zoo technicians to meet existing needs is made showing how keepers may be prepared in a public junior college.

The situation of current educational trends in zoos was researched in the literature and visitations were planned, funded, and carried out to six major zoos. The feasibility of a keeper training program prepared and presented by a junior college was investigated.

Upon completion of feasibility studies, behavioral objectives were organized and a curriculum planned. A program proposal was presented to Santa Fe Junior College for approval, and courses taught on an experimental basis before passage of the proposal.

Research into building a small training zoo was carried out and land requested from the College.

From the research it was found that while zoos have raised the educational quality of their offerings, modern display techniques, multi-media presentations, and some innovative procedures, long used in schools, have never or only recently been adopted by them. The position of zoo keeper has been neglected and educational attempts by the zoo world are either of a remedial nature or follow apprenticeship lines. It was determined that a junior college could devise a preparatory program for keeper education. The program was accepted by the College and courses taught. The zoological garden response to this concept has been extremely positive, as has that of the College, the students, and the community. The junior college has appropriated some ten acres of their new campus to the construction of a training zoo which will be open to the public and staffed by program students.

Educational institutions may aid zoological gardens in realizing their potentials in educating the public along biological and conservation lines. Through better preparatory education for the keeper positions, overall improvement of zoos is made more feasible. It is within the realm of a community junior college, with proper facilities for animal care, housing, and study, to prepare such individuals. Responses to such a program by the educational, zoological park, and student groups have been extremely positive and the initial excellent results assure success with continued college and zoological garden support.

Dr. Giron, a Santa Fe instructor of biology and zoology, conducted this study as a partial requirement for his doctoral degree from the Department of Curriculum and Instruction in the College of Education at the University of Florida. His chairman was Dr. Luther A. Arnold and his co-chairman was Dr. N. Eldred Bingham.

FACTORS INFLUENCING STACK EMISSIONS FROM CITRUS FEED MILL OPERATIONS

Herbert Arthur Ingley, III

With the growth of the phosphate, citrus, pulp, and power industries, air pollution has become an area of major concern in Florida. Phosphate and citrus production are two of Florida's major industries. The population of citrus and citrus by-products are particularly unique in Florida.

For several years there has been a need to investigate the citrus feed mill as a source of air pollution. These feed mills dehydrate peel residue from juice extractors to produce a quality cattle feed. Tons of pollutants are emitted from these mills annually. In order to better understand how to control these emissions, it is necessary to study the complete citrus pulp drying process. With this need in mind, an investigation was initiated to study the factors influencing emissions from citrus feed mills.

A portable pilot plant equipped with several air pollution control devices was taken to the University of Florida's Citrus Experiment Station where it was connected to a pilot feed mill. A cyclonic scrubber rated at 26000 CFM was used in this investigation. The effects of liquid and gas flow rates on the removal of feed mill emissions were studied. Water was used as the scrubbing media.

Unpressed, Valencia reamer peel was used to feed the citrus feed mill at the experiment station. The mill was operated at several different drier exit temperatures. In general, solid emissions increased as these temperatures increased. Experiments were also performed with and without juice sacs in the drier feed. Solid emissions seemed to increase when juice sacs were omitted but the data were not sufficient to validate this observation.

Emissions from the citrus feed mill were categorized as insoluble solids, soluble solids, and peel oil. The effects of the drier operating conditions on the concentration of each contaminant were studied.

The removal efficiencies for the various pollutants were measured for contacting powers ranging from 0.27 to 1.08 horsepower per 1000 standard CFM. The number of transfer units for insoluble solids ranged from 0.38 to 9.2 and for soluble solids ranged from 0.13 to 2.63. It was not possible to accurately determine peel oil removal efficiencies because of the difficulties in sampling the oil. In general, though, removal efficiencies for oil seemed very low. Modifications in the sampling technique were investigated in order to determine a more satisfactory method of sampling peel oil.

Dr. Ingley is an instructor in Chemistry at Santa Fe and the Chairman of his committee was Dr. C. C. Oliver in Mechanical Engineering at the University of Florida.

PRESIDENTS' PERCEPTIONS OF INSTITUTIONAL RESEARCH IN SOUTHEASTERN JUNIOR COLLEGES

George Robert Moore

The objectives of the study were:

1. To determine how the presidents of junior colleges located in Southeastern states presently employing institutional researchers perceive the existing qualifications, functions, and responsibilities of the chief institutional researcher.
2. To determine the extent to which their perceptions are related to institutional control (private, public), institututional size (large, small), and institutional age (old, new).
3. To determine how the presidents of junior colleges located in Southeastern states presently employing institutional researchers perceive the expected qualifications, functions, and responsibilities of the chief institutional researcher.
4. To determine how the presidents of junior colleges located in Southeastern states not presently employing institutional researchers perceive the expected qualifications, functions, and responsibilities of the chief institutional researcher.
5. To determine the extent to which the perceptions of junior college presidents presently and not presently employing institutional researchers in Southeastern states agree on the expected qualifications, functions, and responsibilities of the chief institutional researcher.
6. To determine the extent to which the perceptions of junior college presidents presently and not presently employing institutional researchers in Southeastern states are related to the professional training and experiences of the presidents.

Two hundred fifty-three junior college presidents listed in the 1970 Junior College Directory were invited to participate in the study. Of the 253 junior college presidents comprising the presidents of the Southeastern states, 164, or 64.8 per cent, responded to the mailed questionnaire. Data analysis was made by using the t test and chi square test of significance.

The conclusions were:

1. Presently, the chief institutional researcher is most likely to have received a master's degree in education within the last ten years. Usually, he is titled director of institutional research, he has a small IR staff, and needs competencies in writing ability, statistics, background and issues in higher education, research and design, tests and measurements, and speaking. He most often reports to the president, generally participates in coordinating study requests, conducting and evaluating studies, and initiating studies. Finally, the chief institutional researcher most commonly conducts studies about students.

2. The existing qualifications, functions, and responsibilities of the chief institutional researcher are not related to institutional control, institutional size, and institutional age, other than the fact that large institutions are more likely to use research titles for their institutional researchers.

3. The expectations of the presidents employing institutional researchers and those expectations of the presidents not employing institutional researchers concerning the IR worker are in essential agreement.

4. The chief institutional researcher should have received either a master's degree or a doctorate in education within the last ten years. His title should be director of institutional research and his staff should be composed of approximately one part-time professional and two supporting staff members. Competencies in writing statistics, and research design should be essential for the chief institutional researcher. The other competencies in tests and measurements, issues in higher education, data processing, and speaking should usually be needed by the chief institutional researcher. He should report to the president, should generally participate in planning design, evaluating and conducting studies, coordinating study requests, disseminating findings, and initiating studies. Also, he should conduct studies primarily about students.

5. The title expected to designate the chief institutional researcher is related to the president's highest academic degree. Presidents holding a doctorate are inclined to

> use a research title for the chief institutional researcher. Presidents' expectations of studies that should be conducted are influenced by their highest academic degree, their major field, and their previous employment. Presidents with a doctorate in education and with previous employment in education are likely to expect studies of virtually all types. However, the professional training and experiences of the presidents are not related to any qualifications of the chief institutional researcher nor to other functions and responsibilities of the chief institutional researcher.

Dr. Moore served as Administrative Intern at Santa Fe and his study was under the direction of Dr. Cameron Fincher and Dr. Leonard Kraft of the University of Georgia.

CONCEPTUAL SYSTEMS AND SELF-EXPLORATION

Irene Frees Penry

This study was designed to investigate the relationship between conceptual system orientation as developmental stages in personality development and level of self-exploration process in personality functioning.

A two-part instrument was administered by the researcher to 114 undergraduate college students at Santa Fe Junior College and the University of Florida. Part I, Harvey's "This I Believe" (TIB) Test, was used to measure conceptual system orientation. Part II, the Self-Exploration Stimulus Questionnaire, was designed to elicit a written narrative of an intense personal experience relative to one of the topics in Part I (TIB) from which level of self-exploration could be inferred by judges using the Carkhuff Self-Exploration Scale.

Conceptual systems are based on the theoretical constructs advanced by Harvey, Hunt and Schroder. Four modal conceptual systems or "ways of relating to the world" were described, which people consistently demonstrate in most of their interactions with the world and which are somewhat independent of actual situational factors. System I is the most concrete mode of construing and responding to the world; it is characterized by low level of abstraction and a positive orientation toward extrapersonal referents. System II functioning is slightly more abstract than System I and is oriented toward opposing the same extrapersonal referents. System III functioning is more abstract than System II and is oriented toward establishing and maintaining intragroup consensus as a step toward dependence and manipulative control of other people. System IV is the most abstract mode of functioning. It represents a highly differentiated and integrated cognitive structure manifested in multiple alternative ways of relating to the world based on personal standards founded on objective evidence.

The Carkhuff Self-Exploration Scale attempts to define concrete operations by which self-exploration can be inferred. Self-exploration is the process in which the person is actively and spontaneously engaging in an inward probing to newly discovered feelings about himself and his world. He is fully and actively focusing upon himself, searching to discover new feelings concerning himself, even though he may be doing so perhaps fearfully and tentatively. The Carkhuff Self-Exploration Scale measures an essential process in personality change. The scale is scored form low (1) to high (5) levels of self-exploration. Predictable relationships exist between self-exploration and

and numerous traditonal indices of therapeutic change.

Written responses to the TIB and the Self-Exploration Stimulus Questionnaire were evaluated independently by trained judges, and examined for: (a) extent of correlation between conceptual system orientation scores and summed level of self-exploration ratings; (b) correlations between conceptual system orientation scores and summed level of self-exploration ratings with subject age and sex.

The results indicate that conceptual system orientation, as measured by the TIB, is not related to level of self-exploration process, as measured by the Carkhuff Self-Exploration Scale. The results also indicate that both conceptual system orientation and level of self-exploration process are not systematically related to the age of the subject. These data suggest that conceptual system orientation is unrelated to the sex of the subjects, but that self-exploration and sex of the subjects are significantly related (p .001, two-tailed test), with females showing the higher level of self-exploration.

Dr. Penry completed this dissertation study under the sponsorship of Dr. James L. Lister of the Department of Counselor Education at the University of Florida. At the present time, she is a psychology instructor at Santa Fe Junior College.

COLLEGE PREFERENCE REPORT

Ann Bromley

By its membership in the Florida Community College Inter-institutional Research Council, Santa Fe participates in state-wide studies and receives as a service reports and information helpful to the college. In the fall of 1970, in conjunction with the Florida State-wide Twelfth Grade Testing Program, high school seniors were asked to indicate their first, second or third preference in selection of a college/university following graduation. All public colleges and universities in Florida were coded and data was furnished to Santa Fe for those students selecting the college; it showed: 1) Student name, 2) High school of enrollment, 3) student rank selection, i.e., 1, or 2 or 3 and 4) Student score on the Twelfth Grade Test.

Based on a state-wide return of 91% of the participants, Santa Fe was selected as first, second, or third choice by 1,547 high school seniors. Forty-two per cent of this group were from Alachua-Bradford County schools with the remaining group out-of-district. The distribution of the student scores on the Twelfth Grade Test was basically a normal curve distribution with a slight skewing toward the lower end of the scale. Approximately ten per cent of the sample earned scores between 400-495.

The College utilized these data in writing to the out-of-district high schools in which the students, who had indicated Santa Fe as first choice, were enrolled. The high school counselors were furnished Santa Fe materials and were asked to distribute them to the Santa Fe sample. The Alachua-Bradford group were contacted during counselor visits to district high schools.

A comparative study was made to determine (1) what percentage of the high school seniors who had indicated Santa Fe as a first choice enrolled in September 1971 and (2) what percentage who had ranked the college as a second or third choice of enrollment registered. It was found that twenty-nine per cent who gave top preference to Santa Fe were enrolled the following fall and for those high school seniors who gave it as second or third choice ten per cent became Santa Fe students.

SURVEY OF STUDENT RIGHTS, FREEDOMS AND INVOLVEMENTS

Ann Bromley

Santa Fe Representative, League for Innovation

At the League for Innovation meeting in May 1968, a proposal, Student Rights, Freedoms and Involvements, was sponsored by Santa Fe Junior College. It was voted as a project for further investigation.

League members were requested to send published college information on the topic, but the nature and scope of the materials received did not lend themselves to analysis. Therefore, a survey questionnaire was designed to secure the data in a standardized form, and to determine whether faculty, students and administrators were aware of the policies governing student rights, freedoms and involvements at their college.

The survey questionnaire items were related to, if not identical with, the statements in the Joint Statement on Rights and Freedoms of Students, sponsored, approved as desirable, and endorsed by five national educational organizations during 1967-1968. The questions were planned so that a *yes* answer to each would indicate the college had such a policy and the respondent was functionally knowledgeable about it. It would also show that there was adequate communication among the policy makers, the faculties and the students; and that the policies were in agreement with those recommended by the Joint Statement on Rights and Freedoms of Students. A *no* response would indicate the college did not have such a policy and the respondent knew it; a *do not know* simply indicated a lack of information. Two additional response options were available; they were *sometimes* and *does not apply*. In both cases they were not selected in enough instances to be reportable.

Three colleges agreed to participate in the pilot phase; two colleges administered the questionnaire El Centro Junior College in Dallas, Texas and Santa Fe Junior College in Gainesivlle, Florida returned their questionnaires, and these are the basis for this analysis.

SURVEY ANALYSIS

The analysis presented in this report was the combined college questionnaire results from El Centro and Santa Fe. The sample included a total of 143 student responses and 142 from the faculty.

In the total sample, 80 per cent of both the students and faculty indicated they understood the admission policy of their college, and knew that it was available in print; that public and college facilities were open to students; that free discussion was encouraged in the classroom; that student organizations were open to all students; and that a student publication existed.

Better than one-half of the student-faculty samples responded *yes* with 20 to 40 per cent responding *do not know* to the following statements;

(1) The College secured equal access to public facilities for students.
(2) The College had stated procedures for review of grades.
(3) Student organizations were required to submit a statement of purpose; they were free to choose their own advisors; the role of the advisors was clearly defined; and they were aware that when they invited a speaker or guest, they were responsible that the event was conducted in a manner appropriate to an academic community.
(4) Students were full participating members of Student Affairs Committees.
(5) The role and purpose of the student government were clearly defined in a formal document of the school.
(6) Student publications were produced either totally or partially in conjunction with journalism programs.
(7) Disciplinary procedures were formulated and available to students in written form.
(8) The standards of behavior which the college considered essential to its educational mission and its community life were in published form.

The *do not know* category was checked by more than half of the sample, with 20 to 40 per cent responding *yes*, to the following statements:

(1) The College had a written policy statement concerning the confidentiality of information about students and the conditions under which the information could be transmitted.
(2) Students were full participating members on Academic Affairs, Curriculum, Admissions and other official committees.
(3) The role of student publications was written and available.

It is important to note that 40 per cent of both faculty and students responded *yes* and 30 per cent *no* to the statement that perfomance in the classroom was evaluated solely on an academic basis.

Some questionnaire items were designed so that a *no* response was the more desirable. Thirty per cent of the respondents checked *no* in answering these items: (1) the College maintained files on the political activities of students; (2) affiliation with an extramural organization disqualified a student organization from institutional recognition; and (3) the College paid bail for students involved in violations of civil law.

The respondents expressed a lack of knowledge (50 per cent or higher) in the following areas:

(1) Academic and disciplinary records were separate.
(2) Other information than academic status existed on transcripts.
(3) There were written provisions for the periodic routine destruction of nonessential and noncurrent disciplinary records.
(4) The student press and publications were free from review and advance approval of copy.
(5) The authority to remove editors from office lay in the hands of others than those who appointed them.
(6) In cases of violations of civil law, the College appraised the student of sources of legal counsel, notified his parents, and initiated disciplinary proceedings against him.
(7) A student involved in disciplinary proceedings was allowed to remain on campus and attend classes.
(8) The College played a role in the search of a student's premises.
(9) Restrictions exist as to whom student organizations could invite to speak on campus.
(10) Students were full participating members of Faculty and Presidential Tenure and Selection Committees.
(11) The student newspaper was an independent corporation.

Conflicting responses from students and faculty were found in the areas of disciplinary proceedings and permanent record information. These statements on which the faculty and student samples varied are the following:

(1) More than half the students responded *yes* and 40 per cent *do not know*, with the faculty responding the opposite way, to the statement that the College had a written policy as to the information which should be a part of a student's permanent educational record.

(2) More than half the faculty responded *yes* and the rest *do not know*, with the student sample responding the opposite way, to the statements that students who were involved in disciplinary proceedings were informed in

writing of the nature of the charges against them, and that there were adequate provisions for appeal of disciplinary decisions.

SUMMARY

It is evident that there does not exist a definite knowledgeable understanding of the rights, freedoms and involvements among the respondent junior college students at the two institutions surveyed. In fact, both student and faculty samples indicated, on more than forty per cent of the items, that they lacked the knowledge to answer. Students and faculty did not know fully the policies governing students' rights and freedoms on the two campuses.

Our survey did not set out to test the hypothesis that the lack of such information could be a prominent factor in the student unrest which periodically reveals itself on the campuses across the country. However, the findings from our limited sample, coupled with a relatively modest amount of explicit observable unrest on the two campuses, did not support the theory that there was a high correlation between campus unrest and lack of such information.

The sample is of two junior colleges in different settings and geographic areas. It is too small to support generalized conclusions about social variables which we perceive to be highly complex. We urge many more surveys and much more motivational research to discover and codify the causitive relationships so colleges may create the desired context of student rights, freedoms and involvements.

EXCHANGE EXPERIENCES

John Dumbauld and Rodney Wessman

Santa Fe Junior College and Bakersfield College, Bakersfield, California belong to the League for Innovation and as members invited faculty and staff to explore year-long staff exchanges between colleges. An exchange was arranged between a counselor from Santa Fe and a counselor at Bakersfield. The reports which follow were written by them after they returned to their home campuses.

From Santa Fe to Bakersfield

The scope of Student Personnel Services at Bakersfield College was typical; counseling services were more conservative than those to which I had become accustomed at Santa Fe. The main differences involved individual versus group approaches, personal versus academic emphases, and development of individuals to living versus adjustment of students to the requirements of the world.

The counseling department spent much time in trying to come up with a philosophy which would be acceptable to all. My interpretation is that there is now consensus on assisting students in making choices as an objective, and of providing differential counseling as the means for meeting this objective. Group approaches to reduce "busy work" were examined. Schedule changes are now done *en masse*, and, hopefully, my suggestion that registration be a group procedure rather than involve one-to-one meetings will be initiated for released counselor time. I introduced BE 100 as Psychology 44 during the Spring Semester. It was received favorably by students and faculty and presently will be one of the courses in the Counselor Aide program.

The philosophical and historical perspectives of the institution-as-a-whole present obstacles to personal counseling as removed from the academic framework, and on development to living as removed from the academic and social impingements now felt to be placed on the student.

I bring back to Santa Fe learnings that are mostly experiential. Adjusting my perspectives to match those of another place demanded patience and objectivity. I learned to question my zeal and the temperment to that zeal. That much I had experienced to be good was regarded with suspicion was suprising as well as perspective-producing. I learned that encounter groups had met with failure; I was primarily versed in their success.

Most importantly I learned that methods and procedures are secondary to people whatever the endeavor. The attitude of a student can either block or encourage learning. And this was seen to be true for faculty, administrators, and the public. The internalization of this learning is difficult for me, and so it perhaps means I learned something important.

Were I to begin the exchange now, I would want to know about the conditions I would confront before going to the other institution. In this way I would be able to discuss and explore approaches I could use with people with whom I have come to develop intellectual and personal rapport. I value the experiences and question whether surprises can be approached with wealth of information, or if, instead, surprises must always require one to approach a situation with only the readiness of his person upon which to call.

From Bakersfield to Santa Fe

In appraising my exchange year I should like to address myself to three main questions.

(1) What have been some of the personal and institutional benefits of the program as I experienced it?
(2) What have I been doing?
(3) What suggestions do I have for the League and/or participating colleges?

First, then, some personal benefits.

(1) Planned disruption was good for me. Comfort and sameness can be bad. Leaving a District where I have worked for 22 years to engage in a new adventure did something positive to and for us. While the nature of my work at Bakersfield College had changed considerably over the years, I needed to be interrupted.
(2) It has been a time for stock taking--finding out "where your head is at," as our students would say. Inventory taking, though not always pleasant, is necessary for growth.
(3) It has been stimulating and scary to prove your prowess anew. After all, I had to say to myself, these people at Santa Fe don't really know how good I am.
(4) It was helpful for me to take another good look at Bakersfield College. Before I left California I was aware of the fact that I would be asked a lot of questions. Becoming an authority on my own school was a positive experience.
(5) In a sense I have experienced a "newness of life" of sorts: new friends, new colleagues, new social circles, new ways of doing things. The staff at Santa Fe has made my life rich in many ways.

Next may I suggest an institutional benefit or two. It seems to me that an exchangee can be a real asset to the institution to which it is assigned. Teachers tend to share things with a visitor which they would be less willing to share with a fellow staff member. Hopefully, the exchangee would be more objective and less threatening.

Too, I think the exchangee can be used as a sounding board. Often this year Santa Fe staff members have "bounced things off me" to get my reactions. I think they felt they could do this because I did not have the same type of vested interests as they had.

Now, what have I been doing?

(1) I have taught or facilitated or conducted five BE classes. This has been a most unusual experience and a most innovative approach to student afairs.

(2) Half-time was spent in counseling the MDTA program. This experience has taught me so much I didn't know about poverty, prejudice and failure experiences.

(3) I have acted as a liaison person to help people at Santa Fe get in touch with their counterparts at Bakersfield College in order to share specific information. We have been especially helpful in the area of the Police Science program, working with the Non-certificated Personnel Association, the Faculty Association and the Placement Office. I feel that it is so very important that a person on an exchange view his experience as a college-wide exchange, rather than a departmental exchange.

(4) I have had many opportunities to share and exchange information. To mention a few:voluntary attendance at meetings of major college committees; involvement in in-service student affairs and college training sessions; active participation in discussions of the Executive Committee of the Faculty Association and visits to other Florida junior colleges. In addition, I collected dozens of brochures, course outlines, etc. and talked with out-of-state visitors to the College as well as the graduate students from the University of Florida.

(5) My experience in working with the many referral agencies in the community, especially in regard to MDTA, has been a fine experience. Finally, we have had such a rich social and community life. People in Gainesville and Santa Fe have been great.

Finally, some suggestions for the League and/or participating colleges.

(1) Persons who have a sense of mission, awareness and positive attitude toward innovation should be urged to apply.
(2) The advantages of planned disruption should be emphasized.
(3) Exchangees schedules should be kept flexible. Perhaps one day a week should be kept free of classes in order to visit other institutions.
(4) Institutions should make a deliberate effort to put the exchangee in contact with innovative instructors. This should not be left to chance.
(5) A participant should make it his business to know all about his new school, not just his own department. I can see a number of advantages in choosing someone who has been with the school for a while.

SURVEY OF POST-SECONDARY OCCUPATIONAL EDUCATION

Florida Community Junior College Inter-institutional Research Council and Santa Fe Junior College

In order to compile information on the development, implementation, and evaluation of curricula in all state institutions offering post-secondary school occupational education programs, the Florida Community Junior College Inter-institutional Research Council conducted a survey of faculty and administration. Involved in the survey were eleven area vocational-technical schools and twenty-seven junior colleges including Santa Fe Junior College.

During the first term of the 1970-1971 academic year, a comprehensive questionnaire was administered to a sample of faculty members, program directors, occupational education heads, and lay advisors for selected occupational education programs in each of the participating schools. The questionnaire concentrated on the three areas of development, implementation and evaluation. Information was requested concerning the planning that takes place before a program is started, the operations of the ongoing program, and the things considered important in evaluating the program.

In the area of program development, the forty-seven Santa Fe staff members who participated stated that the institution's philosophy and the program's goals were the most important factors in planning. Professional association reports were the manpower needs information source most important in planning; specific employers and the city were considered the job markets most essential to a programs development. The initial request for a program was first made by an instructor. Either he or the dean of occupational studies directed the planning usually without the use of a committee but in conjunciton with program instructors and licensing agencies. These persons took between six and twelve months to develop the program. No planning was conducted which was not implemented and which did not project employment opportunities for five years or more.

In the implementation phase of planning, the factors which were considered necessary for the program's operation were the getting of students, job characteristics, information from potential employers, and specific teaching techniques. Recruitment of students was to be performed by instructors, former students, and potential employers seeking those persons with related attitudes and interests. Behavioral objectives had been written for the program utilizing specific behaviors and attitudes expected and the level of proficiency required. Instructional techniques were to be determined by the instructor with recall being considered the most important type of learning. The type of teaching in the program consisted of laboratory methods with some lecture and discussion. Twenty-six to fifty per cent of the program was comprised of technical-vocational courses. While students were not tested before entering the program, they were tested for their levels of proficiency at the program's end with the test being developed by the instructor. Although students were not to be given any recognition until they completed the total program, nor were they to be given credit for work experience, it was possible to obtain credit by examination in some courses. Library materials and audio-aids for student use were rated as good by the participating staff members. The studies that had been conducted about the programs were performed by instructors and program directors. While in-service training was available for faculty, no such training was given to administrators and advisory committee members; sabbatical leaves were unavailable for either the faculty or administrators.

The third stage of the study was evaluation. The factors to be considered in this phase were statements of objectives, coordination between counselors and instructors, counseling for disadvantaged students, and sensitivity to technological change, local job opportunities, and student needs and interests. Regarding the teacher and the classroom, the important factors were work experience of the instructor, relation of skills taught to job skills, availability of teaching materials, work space, layout of work areas, and safety practices. The important sources of evaluative criteria were educational journals, occupational instructors, and students. The sample agreed that those who should be and who were involved in evaluation were the same, namely, program direcotrs, instructors, and students. Both counseling and guidance practices were considered in evaluation with the evaluation occurring annually. These annual evaluations have resulted in changes in various aspects of program operations.

The study was coordinated at the College by the Office of Research.

PROJECT FOCUS

Santa Fe Junior College and
American Association of Junior Colleges

During the spring of 1971, the American Association of Junior Colleges conducted a study of community and junior colleges with support from the W.K. Kellogg Foundation. The purpose of the study, known as Project Focus, was twofold: (1) to examine the long-range goals and present practices of the community-junior colleges and, in the process, to identify the social and economic trends which will influence their future role and functions for the coming decade; and (2) to study the AAJC in terms of its stated functions and long-range goals to ensure its continued relevance to the needs of its constituents.

Santa Fe Junior College was one of the colleges included in a random sample of 150 community and junior colleges. Both faculty and student samples completed separate survey questionnaires which concentrated on the College's goals and programs. At the present time, the College has received results concerning student goals and aspirations, development, and evaluation of their collegiate experience and faculty and student attitudes of the College's goals.

The student goals and aspiration results indicate that the educational major of a student does not necessarily reflect his vocational choice. For example, while 13 per cent of the student sample responding chose arts and humanities as their educational major, only eight per cent selected it as their vocational choice. The vocational roles chosen most often by the student sample were that of teacher or therapist and practitioner or producer of services or products. A bachelors degree was the educational aspiration of most students. Concerning college goals, students viewed academic goals as more important than vocational, social and nonconventional goals.

In the section on student development, it was revealed that intellectual pursuits outside of class are more likely to exist in the area of social science rather than science, mathematics, or humanities. Nonacademic achievement tends to be humanistic, cultural or artistic and not in the areas of music and leadership. The number of nonacademic achievements per student is six although this is also the standard deviation. In achieving college goals, students feel that they have made the greatest progress in intellectual-humanistic and scientific-independent areas rather than in group welfare, practical status, personal development, and communication skill areas.

The evaluation of college experiences consisted of an examination of the areas of college instruction, services, and policies. Instructors received high ratings in class organization, encouragement of class participation, being in touch with students' lives, caring if material is understood, ease of teaching style, and not criticizing or embarrassing students. Lowest instructional ratings were in describing personal opinions, facility for communicating knowledge, entertaining manner, and permitting students a voice in class direction. The low ratings were received 14 to 20 per cent of the time whereas the high ratings were received 80-90 per cent of the time. Students expressed the most favorable reactions to the college services of academic advising and counseling and the least favorable reactions to health and housing services. Concerning college policies, students generally expressed agreement in those areas in which they voiced an opinion. Disagreement with policies existed only in the adequacy of recreational facilities, social programs, and food services.

The investigation of college goals found the faculty more emphatic than students in stating that all the listed goals do exist and should exist at the College. This was true in all instances except one. The faculty disagreed that the College allocates percentages of the total enrollment for minority groups or groups having low socioeconomic status and feel that this is the way it should be. This, of course, is in keeping with the idea of an open door college.

This study was coordinated at the College by the Office of Research.

STUDY OF EVENING STUDENTS' COUNSELING NEEDS

Max L. Bassett

A survey of students' needs for counseling services in the evening was initiated in the spring term, 1971. The purpose of the survey is that of assessing the extent to which students have need for counseling services available during the evening class hours. As well as examining potential demands for additional counseling services, this study is attempting to measure the types of questions or problems evening students have to discuss with a counselor.

One hundred and twenty-five evening students have been surveyed to date. There is an even distribution of full-time and part-time students, and a large majority of the total group are credit students. The extent to which evening students need counselor assistance can not be assessed at this time because of the need for surveying additional students but also because of the need for a more even distribution of credit and non-credit students. These preliminary reports do indicate clearly that the types of questions and problems that the evening students have fallen in the area of academic course and program advisement.

The study will continue during the summer term, 1971 with efforts made to survey at least another 125 students, especially larger numbers from the non-credit courses. It is hoped that a summary report with possible implications for future counseling services will be available early in the fall term, 1971.

A PILOT PROJECT TO INVESTIGATE THE ROLE OF A PSYCHIATRIC CONSULTANT AT SANTA FE JUNIOR COLLEGE

Rubye Beal

During the academic year 1970-71, the Student Affairs Division, supported by funds from Staff and Program Development, attempted to determine the need for a psychiatric consultant on a retainer fee basis for students and Student Personnel staff at Santa Fe Junior College. The consultant assisted counselors in dealing with crisis situations and lent regular developmental assistance to the Student Personnel staff. The consultant did not provide long-term therapy for individual students but did serve as an initial contact person and assisted with arrangements for further referral.

In reviewing the utilization of the consultant, it appears that Santa Fe does need a psychiatric consultant to serve in crisis situations. Activities included talking with counselors by telephone, in his office, and in their offices regarding specific crisis situations. The consultant facilitated students' use of emergency facilities including the Alachua County Mental Health Agency. To a limited extent the consultant met with parents of Santa Fe students. In several instances, he was contacted by Santa Fe teachers and assisted them in crisis situations with students. He also, to a limited extent, assisted both Academic Affairs faculty and Student Affairs faculty with personal and/or family problems. Approximately fifty per cent of his time was utilized in this way.

In terms of developmental assistance to the Student Personnel staff, the other half of the consultant's time was spent in staffing case conferences, working with counselors in classes of The Individual In A Changing Environment, critiquing video tapes of small groups, and serving as a process observer of the small group process. He also served as a consultant to the staff in seminars designed for in-service training and facilitation of the staff's group process.

Evaluation of the project in terms of the need for a psychiatric consultant and the specific services he may render is still tentative. The project will continue in the academic year 1971-72 and further efforts will be made to creatively utilize these services.

FOLLOW-UP STUDY OF LICENSED PRACTICAL NURSING GRADUATES

1959-1969

Martha Bell, Ruby Philpot, and Barbara Cross

In 1959, the Licensed Practical Nursing Program was started by the Vocational Department of the Alachua County Board of Public Instruction and functioned as a part of that department until the junior college assumed the responsibility in 1966 when Santa Fe opened. From 1959 to 1969, 376 students were graduated from this program and this report is a resume of a follow-up study of these graduates.

Thirty-six per cent or 136 graduates returned the questionnaire with 24 per cent non-locatable and 40 per cent non-returned.

Those under 50 years of age constituted 85 per cent of the graduates. Almost half of the group (47 per cent) were the third or later child in the family; in fact, 12 per cent were the sixth or later child. Most of the graduates were white (82 per cent) and married or had been married (88 per cent). A large segment of the more recent classes was negro, only two per cent were male. The Florida law requires a minimum of a tenth grade education for admission; however, 71 per cent had completed high school prior to entering the program. These demographic and informational data tend to confirm previous impressions that this occupational program is particularly attractive to a young married adult, a high school graduate who frequently is the third or more sibling in the family and who, if the trend continues, is just as likely to be negro as white.

Very few worked while enrolled in the program and they received their support from parents, savings, spouses, loans, and other sources. They were asked to identify problem areas while a student; in rank order, they were: study problems, home and family, finances and test taking. No one indicated a problem with instructors or other students.

It was interesting to have our respondents divided: 58 per cent graduating while it was a junior college program and 42 per cent graduating while it was a part of the Vocational Department of the Alachua County Board of Public Instruction.

These graduates are employed (83 per cent) in licensed practical nurse work and perform their responsibilities in various medical settings: 32 per cent in a general hospital; 17 per cent in the teaching hospital; 11 per cent in nursing homes; 10 per cent in a doctor's office; and 7 per cent in the veteran's hospital with the remainder on private duty or not working at the time of the survey.

More than three-fourths have been in their present position more than a year and fifty-nine per cent are earning at least $400 per month. Generally, they carry out their duties during the day shift frequently in a section designated as medical, surgical, intensive care and specialized. Their patient load ranged from 5 to 20+ with approximately 40 per cent responsible for 15 to 25 patients.

It was interesting to note that 7 per cent of our graduates were enrolled in the Associate Degree in Nursing program at Santa Fe and are funding their continuating education by LPN employment. In addition, 1 per cent are enrolled at the University of Florida, other junior colleges and out-of-state schools.

The role of the licensed practical nurse in a hospital setting has been subjected to a great deal of discussion and writing. Team leading responsibilities, administration of medication, opinions concerning most valuable courses in their training program and concerning the most helpful post-graduate courses, if offered, were specific concerns of the LPN instructional staff. When asked if they were responsible for Team Leading, 36 per cent said they were with only 15 per cent indicating in-service training to learn this approach. Approximately 67 per cent administered medication with less than half receiving instruction on the job. The four courses listed as most valuable during their training programs were: Body Structure and Function, Medications, Introduction to Illness Conditions and Nursing Needs of System Disorders. Based on their experiences, the four courses they thought that would be most helpful were: Intensive Care and Emergency Room Nursing, Advanced Medications, Surgical Nursing and Medical Nursing.

Approximately thirteen per cent of the graduates are members of their professional LPN organization.

The results of this project indicate:

1) The graduates are employed in areas in which they were trained in the LPN Program;
2) Most are married, under 50 years of age and female;
3) Because of the increasing demand for them

to perform a wider range of functions, it would be worthwhile to develop post-graduate courses or in-service training programs in: team leading, advanced medication, intensive care and emergency room nursing, surgical nursing and medical nursing; and

4) Although LPN training is often considered to be a "terminal" educational experience, a substantial percentage of our graduates have not found this to be true and are continuing their professional education.

Appreciation is expressed to the Office of Research for their assistance in the development of this project and for the statistical analysis of the data.

CHARACTERISTICS OF SANTA FE JUNIOR COLLEGE STUDENTS FOR THE FALL OF 1970 AND SOME COMPARISONS WITH THEIR UNIVERSITY COUNTERPARTS

Ann Bromley

Since 1966 the Board of Regents of the State of Florida has conducted a survey of the characteristics of the entering freshmen and transfer undergraduate students in higher education in Florida. In the Fall of 1970 Santa Fe Junior College again participated in the survey and based on the Santa Fe sample of 597 responses, a profile of the junior college student emerges. In addition to the survey of the junior college population, the questionnaire is also administered to the freshmen and transfer undergraduates at Florida's public universities. In the Fall of 1970 this questionnaire was responded to by 12,192 university students. Eleven out of twenty-two items on the junior college questionnaire and the university student questionnaire are identical. The purpose of this report is twofold: 1) to compare the Santa Fe Junior College students with those admitted to Florida's public universities on the identical items; and 2) to present a description of the characteristics of Santa Fe Junior College students for the Fall of 1970.

Comparison between Santa Fe Junior College Students and University Students

Race, Sex, Age, and Family Income. The categories of sex and race had the appearance of similar distributions for Santa Fe Junior College students and university students. In both groups, there was approximately an equal proportion of males and females with the number of males being slightly larger. The public universities reported 56.6 per cent male, and 43.2 per cent female. For Santa Fe Junior College, the percentages were 53.3 per cent male, and 46.4 per cent female.

While the racial distributions were analogous, the category of race is an uncertain one to report, based on the responses to the questionnaire. The public universities including Florida A. & M., reported 67 per cent white, nine per cent black, 3 per cent other, and 23.3 per cent blank. At Santa Fe Junior College race was identified as 64 per cent white, 9.4 per cent black, 0.5 per cent other, and 26 per cent blank. The larger number of blank responses in both instances makes conclusions based on these data questionnable.

Regarding age, it was found that 85.2 per cent of the public university students were twenty-one years of age or under as compared with only 73.5 per cent of the junior college population at Santa Fe. This item is particularly significant when one considers the fact that the public university respondents ranged from freshmen to students in the fifth year of a five-year bachelor's program. For the junior college, of course, the range is merely the first two years of higher education.

The survey reported that the family income of more junior college students is less than that of public university students. In the Fall of 1970 it was found that 16.3 per cent of the junior college respondents estimated family income as below $5,000 as compared with 13.6 per cent of those enrolled at the university. It was also found that considerably more students at the junior college level are not supported by their families as are those at the university. Comparable statistics show that 29 per cent of those enrolled at Santa Fe receive no contribution from their families while only 14 per cent of those enrolled at the public universities gave this indication.

Parental Educational Levels. For both the public university group and the junior college group, the mothers of the students had completed more academic work than had the fathers. However, in comparing the parents of a university student with those of the Santa Fe Junior College student, it was found that 19.9 per cent of the fathers of the university undergraduate students had completed some high school but did not graduate as compared with 27.9 per cent of the Santa Fe population. The mothers' educational level for public university students was 15.9 per cent for those who had completed some school but did not graduate as compared with 22.5 per cent of those in the junior college population.

These findings substantiate previous studies which show that the family income of the junior college student is much less than that of the public university student and that the educational level of the parents is not as high for the junior college student as that of the public university student.

College Choice. It was found that 93 per cent of the undergraduates from the public universities went to their first or second choice; at Santa Fe Junior College the first-second-choice percentage was 73.3 per cent. Eighty-one per cent of students at the public universities entered directly from a high school; for Santa Fe it was slightly more than 58 per cent. The largest percentage variation between the two groups is represented by those students who worked for a year or more between leaving high school and entering an institution of higher education. The figure for the public universities was 4 per cent; for the Santa Fe Junior College group it was 18.1 per cent. In addition, 3.2 per cent of the public university students indicated military service between high school and college enrollment while for the Santa Fe Junior

College students this was 9.2 per cent. These data along with those on age indicate that the junior college at Santa Fe is attracting an older group of college students who have not continued their education immediately after leaving high school.

Services Requested and Reasons for College Selection. In rank order, the public university undergraduate student identified career information, study skills, personal problems, and reading skills as the first four services in which they would be interested in receiving help. For the Santa Fe Junior College student in rank order they were: career information, personal problems, study skills, reading skills, and health information. The following table shows the most important reason in entering either a university or the junior college.

Percentage of Response for College Selection

Reason	University	Santa Fe
Inexpensive.	7.8%	9.6%
Close to home.	18.6	23.5
Friends were attending.	2.1	5.5
General academic reputation	14.9	7.5
Strong program in intended major.	20.1	2.0
Financial aid opportunities.	3.4	2.0
General impression of campus	14.1	10.2
Opportunity for independent study.	1.5	5.4
I think I can succeed here.	6.3	14.4
Other reasons.	10.8	17.4

Fall 1970 Santa Fe Junior College Student Profile

Based on the Fall 1970 data, the incoming credit student to Santa Fe Junior College was male (53 per cent) and under 21 years of age (73 per cent). His mother is more likely (78 per cent) to be a high school graduate than his father (72 per cent). Although the family income ranged between $5,000-$15,000 (54 per cent) the student financed at least three-fourths of his college expenses through his own efforts (59 per cent). It is more likely that he entered Santa Fe Junior College from another institution (24 per cent), worked (18 per cent), or was in military service (10 per cent) in the intervening period between high school graduation and enrollment at the junior college.

He listed the high school previously attended as in the Alachua-Bradford District (44 per cent).

He was enrolled as a freshman (70 per cent) on a full-time basis (88 per cent) and at the time of admission planned to transfer to a senior institution (77 per cent) which was, in all probability, the University of Florida (69 per cent). He declared his major field of study to be in the area of arts and sciences (22 per cent); education (21 per cent); business administration (15 per cent); pre-professional (6 per cent) and engineering (6 per cent). The other majors selected were, in rank order: 1) architecture and fine arts, 2) nursing, 3) agriculture and forestry, 4) journalism, 5) health related professions, and 6) social work, including criminology and law enforcement. He indicated that he planned to transfer immediately upon completion of his Associate of Arts Degree (79 per cent) and hoped to do graduate work or professional study following his graduation from a senior university (52 per cent).

It should be noted that the data were based solely upon the returns for the Fall 1970 questionnaire and that the information concerning race is extremely tentative because of the large percentage (about 26 per cent) of blank responses.

A SURVEY OF CHARACTERISTICS AND REWARDING EXPERIENCES OF SANTA FE JUNIOR COLLEGE'S AREA TECHNICAL VOCATIONAL HIGH SCHOOL STUDENTS
1970-1971

Albert L. Daniels

Santa Fe Junior College was engaged in a contractual arrangement with the Alachua County Board of Public Instruction for the training of high school students in a vocational-technical type program during the 1969-1970, 1970-1971 school terms. The funding for this program came from allocations granted through special provisions of the Division of Vocational-Technical and Adult Education and Special project grants from the Federal Government to support specific projects. Other allocations, if received, were of other special arrangements, in support of a particular program.

Over a two-year span the enrollment in all programs which involved high school student's averaged 450 students per year in a cluster of programs taught at three (3) different locations or on three of Santa Fe Junior College's five (5) campuses during this period. Of course, basic to this program as well as any program is the student population to be served. The Alachua County School Board, through its transports system, bused students to the various designated campuses for their classes. Each center worked in conjunction with the high school that was served to accomplish the basic aims and/or objectives set forth in the Santa Fe Junior College philosophy, as well as, coordinate the program with the high schools involved.

Prior to the beginning of the program, instructors were involved in a two-week orientation and in-service training session and in addition to the instructional program, there were available the facilities and staff of a Learning Laboratory, individual and small group counseling sessions with professional counselors and a student government organization that took an active part in constructing guidelines and policies, shaping administrative decisions, and communicating the student's point of view.

In the Spring of 1971 a survey was conducted at the request of the Research Advisory Committee of Santa Fe to include high school students then enrolled in the program, inclusive of the following areas of Air conditioning, Masonry, Machine Shop, Auto Mechanics, Welding, Drafting, Electrical Construction, Carpentry, Cosmetology, Tailoring, and a 10th grade Exploratory program, to determine if "in fact" the enthusiasm for learning by high school students so often expressed by the various faculty staff and resource persons, gave real impetus or meaning to other implications for the program. Approximately 350 students participated in this survey.

The students who responded to the questionnaire were predominantly black (65 per cent) with approximately two-thirds being males and one-third female. Their ages ranged from 14 to 25 with 86 per cent of the group between 16 to 18.

Twenty-five per cent of the respondents indicated a family income below $3,000, with an additional 29% reporting between $3,000 to $7,000. A substantial sample did not respond to this income item (29 per cent).

Most of the students at the time of the survey (84 per cent) planned to continue their education. They did not change class schedules (81 per cent) and exercised free choice in the selection of their vocational program (83 per cent). Transportation from the parent school was not a problem for 54%. Less than half (40 per cent) utilized the services of the Learning Lab facilities and most frequently gave their reason for non-attendance as (1) there was one at the parent high school, or (2) there was no credit given.

An open ended question completed the questionnaire. Sixty-nine per cent commented on their "most rewarding experiences during attendance at the school." A few of their statements are:

> "Freedom to smoke."
> "Freedom of movement."
> "Making my first radio."
> "Free atmosphere, very good experiences, relaxed conduct codes, not as strict as parent school."
> "The teachers do know what they are teaching; that makes it more interesting."

A STUDY OF THE CHARACTERISTICS OF EVENING STUDENTS AT SANTA FE JUNIOR COLLEGE

Jack Fuller

During the fall term of 1970, a study was conducted to learn more about the evening student so that the College could better plan future programs. A questionnaire was submitted to evening students enrolled in credit and non-credit courses at the Gainesville main campus and at the Starke Center located at Starke, Florida. For the purposes of the study, an evening student was defined as one who was attending any Period Nine class which met from 7:00 p.m. until 10:15 p.m., Monday through Friday.

Students were requested to complete only one questionnaire and those who were absent from class during the survey week were omitted. The information recorded by the evening student was transferred to data cards and was computer processed.

The summary report of the study was divided into two parts: the statistical information and the selected student responses to an open-ended question about improvement, satisfaction and/or dissatisfaction with the College's educational program and physical plant.

The statistical information revealed the following. Of the 1,353 evening students who completed the questionnaire, 717 were female students, and 636 were male students. It was estimated that the 1,353 responses represented approximately 38 per cent of the total credit and non-credit evening enrollment. Many of the students, 52.6 per cent, were enrolled in credit classes.

Of those responding, 50.9 per cent were twenty-five years and older including 1.6 per cent who were sixty-one to seventy-six years of age. The average age was 29.1 years. In regard to reasons for attending college, 402, or 29.9 per cent, were attending to obtain an Associate of Arts degree while 356, or 26.4 per cent, were attending for the enjoyment of learning. Significantly, 230, or 16.9 per cent, were attending college for the knowledge and proficiency needed in their occupations.

Many of the students (58.4 per cent) began taking classes at the College during 1970, and interestingly, there were forty students still attending classes since 1966 when the institution began operation. Of those responding, 1,196 were Caucasian, 100 were Afro-Americans, and 35 were Oriental and of other backgrounds. Of the respondents, 851 were married.

The evening students had a diversified educational background with 592 reporting some college work but no degree while 363 had graduated from high school. Significantly, 204 had earned a Master's or Doctorate degree. The Bachelor's degree was the educational goal of 315 students while 259 indicated a graduate degree.

Many evening students attend college on a part-time basis and work during the day. Of those responding, 902 worked forty or more hours each week while 406 students reported that they were not employed. As may be expected, the evening students utilized the automobile to get to the College. Although 747 students lived or worked within a radius of one to five miles of the College, 1,119 students drove automobiles to the College. There were 116 students who lived or worked within a radius of sixteen to fifty miles of the College, and twelve students reported a distance of fifty or more miles.

Most of the evening students, 867, were opposed to Friday evening and Saturday morning classes. Many, 711, were interested in attending special workshops or conferences. Evening students were asked about their sources of information about the College. Of those responding, 445 received information from students or friends, 343 received information from newspapers, and the remainder received information from faculty, radio and television and direct mail. Finally, students were asked to indicate if there were other children in their families who would attend Santa Fe in the future. A grand total of 785 potential students was reported.

The second part of the summary report disclosed that of the total 1,353 students who responded to the questionnaire, 514 expressed a comment. Favorable comments were written by 215 students, and 299 suggested improvements.

Some evening students expressed satisfaction with the philosophy, spirit of cooperation, and genuine interest in the individual which exists at the College. Other cited the grading system, the Adult Education classes, and the experimental attitude and instructional capabilities of the faculty.

Among the many suggestions for improvement were the following topics: mail registration appointments to students;

registration at night for those taking night courses only; students near graduation have registration priority; simplify registration; more laboratory space needed; additional mathematics, physics, and science classes needed at night; a committee to study and report on physical plant hazards; better ventilation in classrooms and labs; and the need for pencil sharpeners.

SURVEY OF RECORDS OF SANTA FE JUNIOR COLLEGE GRADUATES 1966-1970

Richard Hebert and Robert Myers

To gather the information for this survey, the records of all the Santa Fe graduates in the years 1966-1970 inclusive, 2063 in all, were examined by the Office of Records and Admissions. The survey was conducted to determine what our graduates look like in order to form a graduate profile.

Out of the welter of data collected two profiles emerge, one of the transfer graduate and one of the native graduate. The term "transfer student" refers to the student who transferred in hours,no matter how many or how few, from another post-secondary school; the term "native student" refers to one who started and completed his entire career at Santa Fe before entering another post-secondary school. Because the transfer graduate is the more numerous, he is the typical Santa Fe graduate, but a look at both profiles is illuminating.

The transfer graduate is white, male and almost twenty-four years old. He attended a Florida high school but not in the local district. Before attending Santa Fe, he spent a little better than a year at another Florida junior college. He transferred in almost thirty-two hours of credit and took an additional thirty-eight at Santa Fe, requiring four terms to do so. His Twelfth Grade Placement Test averaged 306. While at Santa Fe he earned a grade point of 3.22. He was interested in transferring to an upper division school as he met the general education requirements. He had a 42% chance of receiving an "X" grade while at Santa Fe. The junior college he attended before coming to Santa Fe was most likely Central Florida, Miami-Dade, St. Johns River or St. Petersburg. If he attended a four year college or university, it was almost certainly the University of Florida.

The native student gives a little different picture. Although still a white male, he is younger than the transfer student by almost a year and a half. His Twenlfth Grade Placement Test is some fifty points below the transfer's at 253. He earned sixty-six and a half hours of credit at Santa Fe in the seven terms he attended, graduating with a grade point of 2.97. Like the transfer student he did not show any great interest in the two year occupational programs. He is likely to be a graduate of Gainesville High School.

This study needs to be supplemented by a study of Santa Fe's attrition rate, a demographic study of the entire student body for some term and a longitudinal study of a selected body of entering freshman, following them through their stay at Santa Fe and for three to four years afterwards. With information from these studies, plus a continuation of this graduate study through 1971 and following years, an accurate picture of the Santa Fe student body might be obtained and some valid conclusions drawn on the work of the school.

DIFFICULTY ANALYSIS OF THE COMMON PROGRAM'S TEXTBOOKS

Mary Ann Linzmayer

The Learning Lab at Santa Fe's East House conducted a survey to determine the reading level of textbooks used in the Common Program. The purpose of the survey was to determine an approximate grade level of difficulty of the text so that the instructor would be aware of the difficulty level.

The survey was restricted to the texts used only by those instructors of the Common Program at the East House. The book list issued by the Bookstore for the 1971 winter term was used to determine which texts to survey. Seventeen different books were examined in total. Using the Dale-Chall Readability Formula, three samples of approximately one-hundred words each were taken from each text. The grade level of the three samples was averaged to determine an approximate grade level for the book. Three of the books studied were stricken from the list because the style of the writing did not reflect in the difficulty analysis.

Of the fourteen remaining textbooks, the analysis showed a wide range of grade level. The range included pre-junior college, junior college, and post-junior college grade levels. It is important to note that these levels are determined without consideration of content difficulty and serve as partial criteria for deciding a text's appropriateness for a course.

Currently the reading level of approximately 40 additional texts used in the Common Program is being computed. In addition selections from these texts are being analyzed in an effort to devise a reading test which relates directly to reading assignments at Santa Fe.

FOLLOW-UP STUDY OF SANTA FE JUNIOR COLLEGE GRADUATES (1968-1970)

Stephen S. Sledjeski

In the spring of 1971, the Office of Research conducted a study to determine the characteristics, experiences, attitudes, and present status of the 1968-1970 graduates of Santa Fe Junior College. A secondary purpose was to examine the differences which exist between those graduates who are currently attending school as a full-time student and those graduates who are not attending school as a full-time student. A similar follow-up investigation of graduates was performed two years ago covering the period from the College's inception in 1966 through 1968.

Of the 1,202 graduates who were mailed a questionnaire, 666, or 55 per cent responded. The computed results indicated that approximately half the graduates are female and half are male and that half are single and half are married. Most graduates are from 19 to 24 years of age (67 per cent), a United States citizen (95 per cent), and white (93 per cent). Their parents were born in the United States (89 per cent) and are less educated than their children (60 per cent). Three-fourths of the Santa Fe graduates were in the top half of their high school graduating class and received a Florida high school diploma, probably from Alachua County. At the time they came to Santa Fe, they were either entering directly from high school, or transferring from another Florida college. While attending Santa Fe Junior College, the graduates were employed (62 per cent) at a job which required more than twenty but less than forty hours of work per week (46 per cent). They were most likely completely supported by their parents or earned all monies themselves. They were enrolled for five or less terms (50 per cent), as full-time day students (84 per cent), with a continuous enrollment (65 per cent). If they did interrupt their education, it was because of financies, vacation, marriage, etc. The graduates had no transportation problems between campuses (72 per cent), did not find their classes over-crowded (89 per cent), and were not involved in student organizations (66 per cent). Most felt that the "X" was better than a "D", "E", or "F" grade, and it was a grade which in no way penalizes a student. Uncertainty existed as to whether the "X" grade was maintained on permanent student records. Sixty-two per cent of the graduates had not taken an individual study course, but of those who did, 94 percent felt it was as worthwhile as any other course. Seventy-nine per cent did not change their major while a student at

Santa Fe, and 93 per cent did not disagree with the statement that Santa Fe helped them to better understand themselves. Student problems were common to most graduates (81 per cent), usually in the areas of scholastic achievement, career or academic goals, and self-identity. Faculty members, specifically BE 100 instructors and counselors, were the sources the graduates sought for help with their problems. Fifty-eight per cent of the graduates were familiar with the student services offered by the College. The majority of the graduates said that they attended Santa Fe because it was inexpensive and close to home. The most popular reasons for recommending Santa Fe were its informal atmosphere and student-interested faculty; for not recommending Santa Fe, the most popular reason was that programs and course offerings were too limited. Of the six courses in the Common Program, the course, The Individual In A Changing Environment, was considered the most helpful, and the course, Principles of Mathematics, was considered the least helpful. Most graduates felt that student services in the areas of counseling, parking, housing, and the library could be improved.

Regarding the present status of the graduates, 65 per cent are currently attending school as full-time students. They are attending the University of Florida (69 per cent), had no difficulty in transferring (71 per cent), and found themselves adequately prepared for their present course work (86 per cent). The majority of the graduates are majoring in education or arts and sciences, and this major is the same one they had in mind at the time graduation from Santa Fe (72 per cent). The most popular manner of financing their education is through complete parental support. A close second is earning all monies by oneself. Participation in student activities was not common.

Of the remaining 35 per cent of the graduates, those not enrolled as full-time students, most were working full-time (67 per cent) at a job unrelated to their Santa Fe course work (46 per cent), but which provided opportunity for advancement (61 per cent). While they were not in school part-time (78 per cent), the graduates planned to continue their education (72 per cent) once financial problems and family responsibilities were removed (53 per cent).

Significant statistical differences between the above two mentioned groups existed in the categories of age, marital status, pre-Santa Fe status, method of financing education, number of hours worked per week, type and length of enrollment, understanding of the "X" grade, and sources of help with student problems.

STUDENT EVALUATION FOR FACULTY DEVELOPMENT

Stephen Sledjeski and Ann Bromley

A pilot Study on Faculty Evaluation by students was conducted at Santa Fe Junior College during the spring of 1970. Based on this pilot, an evaluation instrument was developed, and a three term faculty evaluation was conducted during the 1970-71 school year. The evaluation is considered to be unique in that it is completely managed by the College's Student Government Association. Except for data analysis which is directed by the Office of Research, all aspects including the ordering of questionnaire forms, their administration and collection, finances, and the dissemination of the analyzed data to faculty and staff are conducted by the Student Government Association.

The evaluation instrument consisted of twenty questions, the first nineteen of which requested the student to rate the instructor on a qualitative scale of one (very poor) to five (excellent). A sixth response was not applicable. The mean response to these 19 questions for the fall, winter, and spring terms of 1970-71 on the scale of five was 4.36 which is a respectable response between the responses of good (4) and excellent (5). The range of means for the 19 questions was from 4.11 to 4.52. (All means for this study are based on an average of 4,709 responses per question for each term.) Rated at the top of the range were the two questions dealing with the instructor's respect of the student as an individual and his encouragement of free discussion or comment. The mean for twelve questions concentrated around the overall mean. They dealt with permitting students to express different points of view; the instructor's helping the student achieve the aims of the course; his ability to answer questions clearly, to explain grading procedures, and to relate the subject matter; his availability outside of class; his organization, assignments, and class control; the shortness of the interval between tests and their return; the instructor's level of communication, his review of material, the appropriateness of his tests, and his overall rating. Lowest on the scale were three questions concerning the instructor's ability to stimulate and hold the students interest, his presentation of the subject matter in an interesting manner, and the suitability of textbooks.

The final question asked the students if the instrument gave a fair evaluation of the instructor. In eighty per cent of the cases, they felt that it did.

Participating in the study during the course of the three terms were 985 class sections with a total of 14,953 questionnaire forms being processed. Taking part in the study were 176 instructors with the average number participating per term being 124 instructors. The average number of class sections which the teacher had complete the evaluation forms was 2.66 sections; each of these sections had an average of 15.2 students who responded to the questionnaire.

The number of participating teachers, class sections, and questionnaires decreased for each succeeding term. One possible explanation was teachers who were rated below the mean during the first term of administration no longer wished to participate in the next two succeeding terms. This was not found to be the case since fifty-two per cent of the instructors who did not participate in succeeding terms were rated above average. Other possible explanations for the decrease were a lessening of conserted effort by those who administered the questionnaire and a decrease in enthusiasm by the participating instructors and students for the repetitious process. While the above decrease was taking place, an increase was also occurring. For each succeeding term the mean response to the first nineteen questions increased. The mean changed from 4.33 (Term II) to 4.34 (Term III) to 4.44 (Term IV).

Two copies of the analysis of each participating class were provided for dissemination. One complete copy is maintained in the Student Government office for student use. This is a service which provides students with student opinions concerning an instructor. In addition, each individual instructor is sent a copy of the analysis for his particular class sections involved in the study. Thus instructors have available data which allows them to examine whether they are high or low on the scale, whether term by term the scales improve, etc.

Appreciation is extended to Dr. John V. McQuitty, Director of Testing and Evaluation for the Florida Board of Examiners, and his staff for their assistance in processing the 15,000 questionnaires.

FOLLOW-UP STUDY OF HIGH SCHOOL VOCATIONAL PROGRAMS

Robert Sterling

In September, 1969, Santa Fe Junior College offered to Alachua County High School students (10th to 12th grades) an opportunity to study selected vocational programs at the junior college. A year later a follow-up study was undertaken; the sample population was the seniors enrolled in the program who had graduated in June 1970. Questionnaires were mailed to 143 high school graduates; approximately 25 per cent returned the questionnaire. A substantial percentage of the sample was "non-locatable".

Based on the limited data, it was found:

1) Of the 36, 78 per cent were males and 22 per cent females ranging in age from 17 to 21. 50 per cent were 18, and 22 per cent were 19.
2) 58 per cent were the third child or later.
3) Half the students made use of the learning lab with 66 per cent stating it was very helpful, and 33 per cent somewhat helpful.
4) 45 per cent of the respondents replied to the questions dealing with student government, counseling and instructor interaction with the general response being "Some Help".
5) 64 per cent of the students replied to the questions evaluating the instructor. Over half of the time the instructor was rated as excellent and 90 per cent of the time as at least "Good". This was true in all cases except "Availability Outside of Class" which 60 per cent of the respondents rated as fair or poor.
6) 56 per cent worked while in the vocational program. Of these, 65 per cent worked 10-20 hours per week and 20 per cent worked 30-40 hours per week. Only 10 per cent said that this work was related to their vocational studies.
7) At the present time, 20 per cent are working part-time, 34 per cent are working full-time, 23 per cent are unemployed, 12 per cent are in military service, and 12 per cent responded "Other". Of the 27 students who were unemployed, 60 per cent feel their present work is unrelated to their present job, and 74 per cent found their jobs by themselves. 45 per cent of the

36 respondents said they desired a job related to their vocational studies.

8) 56 per cent plan to attend college and of these, 75 per cent want to study areas related to their vocational studies. At the present time, 8 per cent are in college part-time, and 14 per cent are in college full-time. All of these students are in areas closely related to their vocational training.
9) At the present time, their future plans are as follows: 29 per cent want to attend college full-time, 26 per cent part-time, and 55 per cent do not want to attend. Regarding work, 57 per cent want to work full-time, 26 per cent part-time, and 17 per cent do not want to work.
10) Three out of 36 (8 per cent) have contacted Santa Fe Junior College about admission, and 46 per cent would like to contact Santa Fe about admission.

To make any general inferences from the analysis would be imprudent due to the small return of the questionnaire. It is not possible to state that any conclusion would be representative of the entire population of high school vocational students who were involved in this program.

COLLEGE ENDORSED PROJECTS

MATURE WOMEN AT SANTA FE JUNIOR COLLEGE

Judy Ann Aanstad

One characteristic of the community junior college which distinguishes it from other institutions of higher education is the diversity of students who attend its classes. While this diversity is welcomed, community junior college personnel need to better understand student sub-populations in order to more effectively meet the needs of these students. The purpose of this study is to describe one such group -- mature women.

A questionaire was sent by mail to all women twenty-five years of age or older who were attending Santa Fe for credit during the fall quarter, 1970. The questionaire covered personal data, educational and vocational plans, attitudes and problems associated with their return to school, and personal reactions to Santa Fe. Sixty-nine per cent of the 285 women involved in the study returned the questionaire.

Over half of the women are twenty-five to thirty-five years of age. Seventy-one percent are married. The women are most likely to have two children. Eighty-two per cent of them are white and eighteen per cent, black. The women are most likely to be attending Santa Fe full-time during the day or part-time at night. Fifty-nine per cent are working while attending school. Of these, sixty-six per cent are working forty or more hours per week.

Seventy-one per cent planned to continue their education when they finished high school. Fifty-nine per cent are now taking courses toward an A.A. degree and plan to transfer to a senior college. Nursing and teaching are the most common occupational goals.

Forty per cent mentioned no problems at home as a result of returning to school. Others mentioned lack of time for family and household duties.

The women generally find themselves well accepted by other students. Eighty per cent, however, feel they are too busy for organized activities beyond classroom work.

Close to half were concerned before beginning Santa Fe about how well they would do academically and sixteen per cent were concerned about both academic and social adjustment. At the time of the questionaire, seventy-six per cent felt socially and academically comfortable. Forty-five per cent had a relative or close friend associated with Santa Fe before beginning classes.

The women overwhelmingly recommended Santa Fe, while finding few faults. The two most common suggestions asked for more classes or more convenient times and locations and for more personnel services and counseling.

When asked what they liked about Santa Fe, close to half mentioned good teacher-student relations and the teachers' willingness to help students. Thirty per cent mentioned the informal social atmosphere and the acceptance of the individual at Santa Fe.

The results of this study indicate both a positive attitude toward Santa Fe by the mature woman student and possible directions Santa Fe can move to better meet the special needs of this group of students.

This study was conducted by Miss Aanstad under the sponsorship of Dr. Robert Stripling, Professor of Education, University of Florida, and with the cooperation of Dr. Rubye Beal and Dr. Ann Bromley of Santa Fe Junior College.

A MODEL OF EFFECTIVELY COMMUNICATED ORIENTATION PROCEDURES IN THE COMMUNITY COLLEGE

Robert Gatton

The central purpose in this study had two thrusts: one was the examination of research reports and general writing in a number of fields in which the study of communication has received attention, focusing upon information and theories which provide a framework for viewing the orientation process. This part of the purpose was set forth in Chapters II, III, and IV of the study. The second thrust was deriving from this documentary evidence a conceptual model of the orientation process and expanding it into a checklist form for analyzing and evaluating the orientation program in a community college. This part of the purpose was the subject matter of Chapter V, which includes an examination of the research models used as a basis for developing the conceptual model. Chapter VI includes a description of on-site visits at selected community colleges, for the purpose of gaining a perspective about orientation from people actually involved with it, to complement that gained from the literature. The final chapter consists of summary, conclusions, and recommendations.

In this study, the process of orientation of faculty in the community college was examined using the dynamic frame of reference provided by communication theory. A broad theoretical approach was utilized because of the fragmented state of communication theory, in general, and of the orientation ramifications of communication behavior in particular. The study was focused primarily upon theoretical matters, and utilized a descriptive rather than an experimental approach. The effort was made to reorganize and reinterpret existing data in the current store of knowledge, within the scope of the problem. The goal was to work toward establishing a framework which enables the practitioner to focus this knowledge on the problem of orientation of faculty in the community college in a meaningful way.

In view of the nature and purpose of the study, no single method appeared to be adequate. Rather a combination of analysis, description, synthesis, and interpretation of relevant materials was generally utilized. Examination of the available documentary evidence related to the process of communication and the orientation process was utilized as a foundation of the study. While empirical evidence derived from other studies was utilized, primary research was not conducted in conjunction with the study. The present disorganized state in the development of communication theory motivated the use of secondary research and a broad theoretical approach. Approaching the problem through secondary research permitted building a broad frame of reference, as opposed to the narrow focus inherent in an empirical study.

The originality of the study lies not in the formulation of any radically new basic ideas about orientation or communication, but rather in the way in which principles of communication were synthesized to offer a systematic approach toward a college administrator's effective utilization of communication knowledge and theory in accomplishing the orienting function of administration. The study thus serves to integrate the existing store of knowledge, making it more useful.

The model and its checklist extension were designed to satisfy the requirements of systems analysis as identified by a number of writers and theorists. Since a normative report of orientation programs in community colleges was not the focus of the study, the model emphasizes process and is designed to illustrate how an individual college may feed in the particular items of information and activities or experiences it deems important as a part of its orientation program. It illustrates the essential relationship between effective communication and effective orientation as factors in realizing organizational objectives. In an orientation program, the initial orientation experiences should contain only the critical, minimal information necessary to job and role success, the rest being sequenced into the future.

The development of guiding principles through synthesis represented a seminal theorizing which may serve to initiate further theorizing, testing, and research. The principles derived in this study should serve as starting points for primary research to indicate whether they stand confirmed and verified.

Dr. Gatton, a University of Florida doctoral student in the Educational Administration division of the College of Education, conducted this dissertation study under the sponsorship of Dr. James L. Wattenbarger.

105

A CONCEPTUAL COST ACCOUNTING MODEL FOR A COMMUNITY JUNIOR COLLEGE

Robert H. Hosken, Jr.

The purpose of this study was to develop a conceptual cost accounting model for a community junior college. The model was designed to meet the needs of administrators at the community college, as well as at the State level, and was developed in conformity with accepted general and cost accounting concepts.

The general accounting concepts identified as being pertinent to this study were: the going concern concept, the concept of consistency, and the concept of diversity in accounting among independent entities. The pertinent cost accounting concepts were: that costs should be classified according to the product or service, that a cost should be classified according to the accounting period to which it applies, that costs should be analyzed according to their tendency to vary with volume or activity, and that those related to a given function should be charged to the department responsible for carrying out that function.

To provide a foundation for development of the conceptual model the organization of one Florida community college was analyzed in depth, and State level requirements were also studied. A series of interviews with key administrators disclosed that the college needed a system for assigning costs to Divisions and Departments on the basis of types of services performed. State level administrators were found to be in need of cost figures for courses and programs. By and large, the State's requirements coincided with the needs expressed by the college administrators.

The analysis of the organizational structure of the college resulted in the identification of the cost centers utilized in the model, as well as the direct costs associated with these cost centers. Costs of the various departments were distributed through a step-down procedure whereby direct costs of one level of administration were allocated as indirect costs to the next lower levels, each lower level being charged according to the extent to which it benefits from the activities of the administrative level being allocated. Ultimately, all costs were allocated to basic cost centers, the individual classrooms.

For purposes of equitable allocation of costs within the college, as well as for the development of cost figures which would be comparable on a state-wide basis, a standard unit is needed. In this study, the credit hour has been used for that purpose. One of the advantages of using this unit is that the credit hour may be employed in the assignment of the direct expenses of faculty and in the final analysis of the costs per course. In this manner, comparable cost figures may be developed for courses having different requirements for time devoted to lecture and/or laboratory.

The field testing of the model resulted in some modifications that were concerned with the organizational structure at Central Community College, but was found, in general, to satisfactorily meet the needs of the administrators, and to be compatible with the accounting system already in use by the college.

The model was also evaluated by two State level administrators, one in the Division of Community Colleges, and the other a member of the staff of the Auditor-General's Office, State of Florida. The model was found to be compatible with the uniform accounting system prescribed by the State for community colleges, and also to meet the cost accounting reporting requirements required by State law.

The findings of this study indicate that the concepts and procedures underlying this conceptual model could be used as the basis for developing cost accounting systems for other community colleges.

Dr. Hosken completed his doctoral requirements in Educational Administration at the University of Florida under the Chairmanship of Dr. James L. Wattenbarger. At the present, Dr. Hosken is the Vice President for Business Affairs at Santa Fe Junior College.

SELECTED STUDENT OPINIONS ABOUT TRANSFER PROBLEMS

**Caroline Noyes*

The topic that I chose to investigate for my project was "What happens to the Santa Fe Junior College student when he transfers to the University of Florida?" I am interested in this topic for several reasons. First, I may want to transfer myself and I wanted a way of predicting what my own experiences might be. Second, I have a son who will have to make some decisions regarding higher education soon, and I wanted a way to evaluate the role that the junior college might have in helping or hindering his education. Third, I have heard criticism by University faculty members as to the adequacy of the preparation that Santa Fe Junior College gives to students preparing to complete their college education at University of Florida.

There were four main questions that I wanted to answer:

1) Are there noticeable differences in faculty-student relationships and inter-student relationships in the two institutions? If these differences do exist, are they a problem to the transfer student, and if so, does the difficulty decrease over a period of time, and how much time?
2) How well do Santa Fe Junior College students do academically at the University of Florida?
3) Is there a correlation between grades and adjustment?
4) What do the students feel could be done to make the transfer easier?

I expected to find that students did notice differences in faculty-student and inter-student relationships between Santa Fe Junior College and the University of Florida, and that these differences would be a problem to them for two or three quarters, but that it would decrease. I expected to find that as adjustment improved, grades would improve. I also expected to find that Santa Fe Junior College students did perform at least well enough academically to survive in the large University system. The fourth question was open.

I separated my second main question from the rest as complete information concerning grades for all Santa Fe Junior College transfer students for the last three quarters was available to me from the Student Affairs Office at Santa Fe Junior College.

For the rest of the project I decided to use a questionnaire. It was financially impossible to mail questionnaires to all 619 Santa Fe transfer students enrolled at the University of Florida during spring quarter 1971; so, I selected 300 names alternately from an alphabetical list of the students. However, due to the chaotic time that I did this (black students were withdrawing from the University) and the fact that some addresses were not available, I sent out only 240 questionnaires. Of these 240, I received 120 returns, but one of these had not been a Santa Fe Junior College transfer so I used 119 or just one less than 50 per cent.

The respondents were divided: male, 49 per cent; female, 51 per cent; white, 93 per cent; negro, 4 per cent; oriental, 1 per cent; other, 2 per cent. The majority indicated they were Americans (87 per cent) and were married (51 per cent). The colleges at the University in which they were enrolled, in rank order, were: education, arts and sciences, journalism, engineering, business administration, fine arts and architecture, physical education, health related, and agriculture. Their ages ranged from 19 to 54 with the largest percentage (44 per cent) between 20 to 22. One of the most interesting aspects of the project was that 50 per cent of the respondents had previously attended the University of Florida. In other words, they were admitted to the University of Florida, transferred to Santa Fe Junior College, graduated with an Associate of Arts degree and then were re-admitted to the University.

The conclusions that I have drawn from these 119 responses are these:

1) There does seem to be noticeable differences in faculty-student and inter-student relationships between the two institutions. Apparently students are most troubled by differences in faculty-student relationships, based on an affirmative response by 71 per cent of the sample.
2) Most students who do report problems with these relationships seem to adjust by the end of the third quarter. The percentage of students indicating this to be a problem decreased from 54 per cent for the first quarter to 7 per cent the third quarter.
3) Apparently a transfer student might expect his grades to drop after the first quarter, and improve or remain the same after the second quarter, but the correlation between grades and social problems is not

as clear as I had expected.

Not all students answered the last question "What could either or both schools do to make transfer less difficult?", but those who did seemed to have some areas of agreement:

1) Thirty-two students felt that counseling at one or both institutions as to what courses to take was inadequate.
2) Eighteen students felt that the University of Florida attitude towards students should be improved, but offered no suggestions as to how this might be accomplished.
3) Fifteen students felt that Santa Fe Junior College would better prepare the students if it offered courses more parallel to University College courses at the University of Florida.
4) Fourteen students felt that they would have been better prepared if they had harder course work at Santa Fe Junior College.
5) Twelve students said that different dates for starting and ending quarters had caused them trouble.
6) Five students had had trouble getting transcripts from Santa Fe Junior College to the University of Florida.
7) Three students would have liked more prerequisite courses offered at Santa Fe.
8) One student suggested that Santa Fe Junior College offer one large lecture course.

In order to answer my concern about academic survival of Santa Fe Junior College students at the University of Florida, I obtained the following information from the Student Affairs Office at Santa Fe Junior College:

Data on Santa Fe Graduates Attending University of Florida

	Summer Quarter 1969-1970	Fall Quarter 1970-1971	Winter Quarter 1970-1971
No. of students	285	387	619
Av. credit hour load	11	12	12
Av. grade point	2.57	2.5	2.57
No. on probation	23(8%)	56(14%)	50(8%)
No. of withdrawals	16(4%)	19(5%)	9(1%)
No. with GPA of 3.0 or better	128(45%)	97(23%)	203(33%)
No. with GPA of 4.0	-	6(2%)	34(5%)

These figures indicate to me that Santa Fe Junior College students have an excellent chance for academic survival at the University of Florida.

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*Mrs. Noyes undertook this project as a part of a Sociology course at Santa Fe Junior College during Term IV, 1971.

EFFECTS OF TELEVISION NEWS ITEM POSITION ON VIEWER EVALUATION OF NEWS ITEM IMPORTANCE

L. Joseph Sanders

The purpose of this study was to test the effect of the first news item's position in a television newscast on the viewer's evaluation of that item's importance. Three newscasts were video taped. Each newscast comprised three news items written by the researcher to be as nearly equal in importance as possible. Three copies were produced of each newscast with the position of the items altered in each. A sample of 46 students in three cells viewed the newscasts, ranking the items in each newscast according to importance. Each cell viewed all three newscasts, but the position of the news items were altered for each cell.

The researcher found: (1) The position of the first item in a television newscast relative to other items in that newscast has no consistent effect on viewer evaluation of the importance of that item; and (2) the first finding applies alike to those who view television newscasts frequently and those who view television newscasts infrequently.

Mr. Sanders conducted this thesis study under the sponsorship of Dr. Mickie Edwardson of the University of Florida and with the cooperation of Mrs. Ann Ritch of Santa Fe Junior College.

A COMPARATIVE ANALYSIS OF ADMINISTRATIVE STRUCTURE AND PERFORMANCE OF COMMUNITY JUNIOR COLLEGES IN THE STATE OF FLORIDA

John Anthony Scigliano

The purposes of this study were to analyze the context, structure, and performance of two community junior colleges in Florida, and to determine the extent that the relationships established were consistent with Hage's axiomatic theory of organizations and Pugh's multivariate analysis of fifty-two organizations.

A survey of authoritative literature and research was made to identify the variables for the model used in this study. The contextual variables included the following dimensions: size, age, and technology. The six structural variables were specialization, standardization, formalization, centralization, participation, and configuration. The performance segment of the model contained the following dimensions: production, efficiency, job satisfaction and adaptiveness.

The methodology used in this study was to develop contextual, structural, and performance profiles of two public community junior colleges in Florida and to utilize the information thus derived in testing the hypotheses stated in Hage's theory and Pugh's model. Each profile was composed of several dimensions that were scaled by assigning values to each variable with aid of instruments developed for this purpose. Records from the Florida State Department of Education and data derived from personal interviews were used in developing the profiles.

Thirty-four hypotheses were developed that concerned the dimensions in the model and the theory. These hypotheses were tested with the data obtained from two junior colleges for all variables. Spearman rank correlation statistical tests were calculated for a limited number of the variables concerning all twenty-seven junior colleges.

The structural variable of participation was scaled with the aid of logical decision maps. The maps, referred to as the Karnaugh maps, were adapted from the field of electrical engineering for this study. Faculty and administration responses to thirty-five decision items were used as data for the maps. The patterns formed were used to determine the extent of decision making participation in two community junior colleges.

The following conclusions were generated by this study:

1. When faculty participate in decisions that concern their welfare, the junior college is more efficient, is more adaptive, and produces more two-year graduates per FTE enrollment.

2. Decisions in which faculty participate, and that may be considered factors in higher production, efficiency, and adaptiveness, include the following issues: approving new programs, approving new courses, in-service training, requiring faculty presence at ceremonies, altering responsibilities of faculty, allocating faculty load, academic freedom, and student discipline.

3. Junior colleges that are classified as good performers in production and efficiency also rate high on specialization, standardization, and formalization.

4. There is indication that an organization displays a greater readiness to change when it has a higher structuring of activities (specialization, standardization, and formalization).

5. Junior colleges in Florida increase in total number of employees at a faster rate than their FTE enrollment increases. Larger organizations also show a significantly larger percentage of personnel who are not directly involved with the instruction of students.

6. High standardization and high formalization constitute important factors in high faculty turnover.

7. Junior colleges in Florida are more highly structured than organizations in England. This structuring concerns the dimensions of specialization, standardization, formalization, and the percentage of nonworkflow personnel.

8. Community junior colleges in Florida that produce a greater number of graduates also produce these graduates more efficiently than lower production organizations.

Mr. Scigliano is a doctoral student in the College of Education at the University of Florida. This dissertation study was performed in the Educational Administration program under the chairmanship of Dr. James L. Wattenbarger.

A COMPARISON OF SELF-CONCEPT, SELF-ACCEPTANCE, SELF-IDEAL AND SELF-IDEAL CONGRUENCE OF UNIVERSITY AND JUNIOR COLLEGE FRESHMEN

Marcia Wehr

Two hundred twenty-nine Santa Fe Junior College freshmen and 74 University of Florida freshmen completed the Self-Sentiment Survey, designed to ascertain self-perceptions of students on thirty-five traits as to 1) how the individual views himself in relation to his peers (self-identity), 2) the attitude toward the worth of that identity (self-acceptance), and 3) the individual's concept of the values toward which he is striving (ideal self). The discrepancy between self-identity and self-ideal was used as a measure of adjustment or satisfaction with self.

On self-identity ratings using chi-square analysis, university students rated themselves higher (at the .05 level) than junior college students on intellectual self-confidence, academic ability, success in school, drive to achieve, English ability, public speaking ability, and artistic ability. No significant differences were found on academic motivation, liking school, and scientific, mathematical, clerical, mechanical, or athletic abilities. Self-report ratings on interpersonal abilities found the junior college students rating themselves significantly lower on perceptions of social self-confidence, general popularity, ability to love, and good family relations. Generally, these differences in self-identity ratings were similar to those found by Astin, Panos, and Craeger (1967) in their national ACT study.

However, the additional data gathered on self-acceptance, self-ideals, and self-ideal discrepancies indicate that although there are significant differences in various abilities and interpersonal skills between junior college and university students, there seems to be a different enough set of acceptance standards and ideals to have brought about non-significant differences generally in how they accepted themselves (self-acceptance) and between what they were (self-identity) and what they aspired to become (ideal self).

From this study it appears that the junior college attenders are operating on different sets of ideal selves from the university students. If part of the goal of education is for students to become what they wish to become, this study helps give credence for a different type of educational environment with changed standards from more traditional educational systems to meet the desires of the junior college students. The students, themselves, as measured by self-ideal congruence, seem to be as well adjusted as the university students who rate themselves higher in social and academic skills; so, it seems it is the institution that must change its traditional ideals and emphases to an institution more suited to success and ideal attainment for the type of student attending a junior college.

Foremost from the results of this study it appears that traditional emphases on English may not be appropriate for students who do not seem to possess nor ideally value this core part of our educational system. Perhaps their lower English ability relates to their lower high school grades and college entrance test scores, and to their lower self-ratings on academic ability, success in school, public speaking ability, and intellectual self-confidence since so much emphasis is placed in school systems and testing on communication skills. Perhaps the experiential programs which de-emphasize papers and extensive reading, along with grading systems designed to create success experiences for these students meet their needs better.

Generally, there seems to be a conflict between what traditional educational systems offer and what junior college attenders want and see as having meaing to them. It appears that junior colleges should strive to make their institutions different from the first two years of universities and should not become merely transfer institutions. This study, in pointing out the differences not only in what junior college and university attenders are like, but also in what they would like to become, makes this writer wonder if the university system as it exists today would ever be appropriate for meeting self-concept needs of the type of student attending junior college.

Miss Wehr conducted this study while a graduate student in the College of Education at the University of Florida. The University sponsors were Dr. Joseph Wittmer and Dr. Edward Tolbert and the Santa Fe staff member coordinating the project was Dr. Rubye Beal.

A COMPARISION OF 16 PF SCORES OF PARAPROFESSIONAL AND COUNSELOR EDUCATION STUDENTS FOR PERSONALITY FACTORS AND PREDICTIVE COUNSELOR EFFECTIVENESS

Marcia Wehr

The idea of using paraprofessionals trained as counselor-aides is spreading as more training programs commence and as graduates of these training programs begin to appear in our working force. Questions are being asked as to who are these counselor-aides, and how do or should they differ from traditionally-trained counselor-professionals in personality characteristics and professional roles.

To aid in answering these questions, 55 counselor-education students from the University of Florida and 34 counselor-aides from Santa Fe Junior College were administered the standardized 16 Personality Factor Questionnaire. Group mean comparisons indicated there were definite personality differences between the two groups.

At the .001 level students enrolled in the counselor education program were found to be more intelligent, more emotionally stable and mature, more trusting and adaptable, more self-assured and confident, and more relaxed than the counselor-aides. Students in the counselor education department were also found to be in comparison more conscientious and rule-bound at the .05 level and tended to be more tough-minded and realistic and more practical and careful at the .1 level of significance.

Relating these data to studies of counselor effectiveness using the 16PF, significant differences were found on three variables. On Factor G, counselor-aides tended to be more casual and expedient and on Factor I scored more tender-minded and sensitive than counselor-education students. Both these factors have been found in previous studies to be positively related to effectiveness. However differences on Factor I showed counselor-education students to be more trusting and adaptable than the paraprofessionals, a factor previously found related to establishment of effective counseling relationships.

In several respects on personality scores, the groups of counselor education and paraprofessional students were more like each other than were like the average person in the norm group with males of both populations found to be more intelligent, casual, tenderminded and sensitive, forthright and natural, following own urges, and liberal and experimenting than average males as normed on the 16PF. Females of both groups were more intelligent, liberal and experimenting, venturesome and socially-bold, forthright and natural, and following own urges than average women.

Perhaps the lower scores counselor-aides received on intelligence, maturity and emotional stability, and the higher self-opinionated and apprehension scores may in part reflect their general immaturity in relation to the older counselor-education students, while their higher casualness, sensitivity, and unconventionalism may be attributed to their greater youthfulness.

Yet for whatever the reasons, it is apparent that although in many respects counselor-aides and counselor-education students are more alike than like the average person, the two groups are significantly different. The effect these results have on the controversy of roles for counselor aides seems clear. If we accept the results of previous research indicating that personality influences counseling relationships, then the same role of counselor given to two groups composed of "counselors" with significantly different personalities should result in different counseling relationships and outcomes.

Some writers feel that the addition of paraprofessionals will cause problems in a growing professionalism. On the other hand, the addition of these new personalities may advance professionalism, at least one defined by outcome.

This study was conducted by Miss Wehr while she was a graduate student in the University of Florida's College of Education. Dr. Joseph Wittmer and Dr. Edward Tolbert were her University sponsors, and Dr. Rubye Beal was her Santa Fe coordinator.